GA-8I915MK-GV

Intel® Pentium® 4 LGA775 Processor Motherboard

User's Manual

Rev. 1001

12ME-915MKGV-1001R

* The WEEE marking on the product indicates this product must not be disposed of with user's other household waste and must be handed over to a designated collection point for the recycling of waste electrical and electronic equipment!!

* The WEEE marking applies only in European Union's member states.

Declaration of Conformity

We, Manufacturer/Importer
(full address)

G.B.T. Technology Trading GMbH
Ausschlager Weg 41, 1F 20537 Hamburg, Germany

declare that the product
(description of the apparatus, system, installation to which it refers)

Motherboard
GA-8I915MK-GV
is in conformity with
(reference to the specification under which conformity is declared)
in accordance with 89/336 EEC-EMC Directive

☐ **EN 55011**	Limits and methods of measurement of radio disturbance characteristics of industrial, scientific and medical (ISM) high frequency equipment	☒ **EN 61000-3-2**	Disturbances in supply systems caused
		☒ **EN 61000-3-3**	Disturbances in supply systems caused by household appliances and similar electrical equipment "Voltage fluctuations"
☐ **EN 55013**	Limits and methods of measurement of radio disturbance characteristics of broadcast receivers and associated equipment	☒ **EN 55024**	Information Technology equipment-Immunity characteristics-Limits and methods of measurement
☐ **EN 55014-1**	Limits and methods of measurement of radio disturbance characteristics of household electrical appliances, portable tools and similar electrical apparatus	☐ **EN 50082-1**	Generic immunity standard Part 1: Residual, commercial and light industry
		☐ **EN 50082-2**	Generic immunity standard Part 2: Industrial environment
☐ **EN 55015**	Limits and methods of measurement of radio disturbance characteristics of fluorescent lamps and luminaries	☐ **EN 55014-2**	Immunity requirements for household appliances tools and similar apparatus
☐ **EN 55020**	Immunity from radio interference of broadcast receivers and associated equipment	☐ **EN 50091- 2**	EMC requirements for uninterruptible power systems (UPS)
☒ **EN 55022**	Limits and methods of measurement of radio disturbance characteristics of information technology equipment		
☐ **DIN VDE 0855** ☐ **part 10** ☐ **part 12**	Cabled distribution systems; Equipment for receiving and/or distribution from sound and television signals		

☒ **CE marking** CE (EC conformity marking)

The manufacturer also declares the conformity of above mentioned product with the actual required safety standards in accordance with LVD 73/23 EEC

☐ **EN 60065**	Safety requirements for mains operated electronic and related apparatus for household and similar general use	☐ **EN 60950**	Safety for information technology equipment including electrical business equipment
☐ **EN 60335**	Safety of household and similar electrical appliances	☐ **EN 50091-1**	General and Safety requirements for uninterruptible power systems (UPS)

Manufacturer/Importer

(Stamp)

Date : Oct. 7, 2005

Signature : *Timmy Huang*

Name : Timmy Huang

DECLARATION OF CONFORMITY

Per FCC Part 2 Section 2.1077(a)

Responsible Party Name: G.B.T. INC. (U.S.A.)

Address: 17358 Railroad Street
City of Industry, CA 91748

Phone/Fax No: (818) 854-9338/ (818) 854-9339

hereby declares that the product

Product Name: Motherboard

Model Number: GA-8I915MK-GV

Conforms to the following specifications:

FCC Part 15, Subpart B, Section 15.107(a) and Section 15.109 (a),Class B Digital Device

Supplementary Information:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful and (2) this device must accept any inference received, including that may cause undesired operation.

Representative Person's Name: ERIC LU

Signature: *Eric Lu*

Date: Oct. 7, 2005

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Product Manual Classification

In order to assist in the use of this product, Gigabyte has categorized the user manual in the following:

- For detailed product information and specifications, please carefully read the "Product User Manual".

- For detailed information related to Gigabyte's unique features, please go to "Technology Guide" section on Gigabyte's website to read or download the information you need.

For more product details, please click onto Gigabyte's website at www.gigabyte.com.tw

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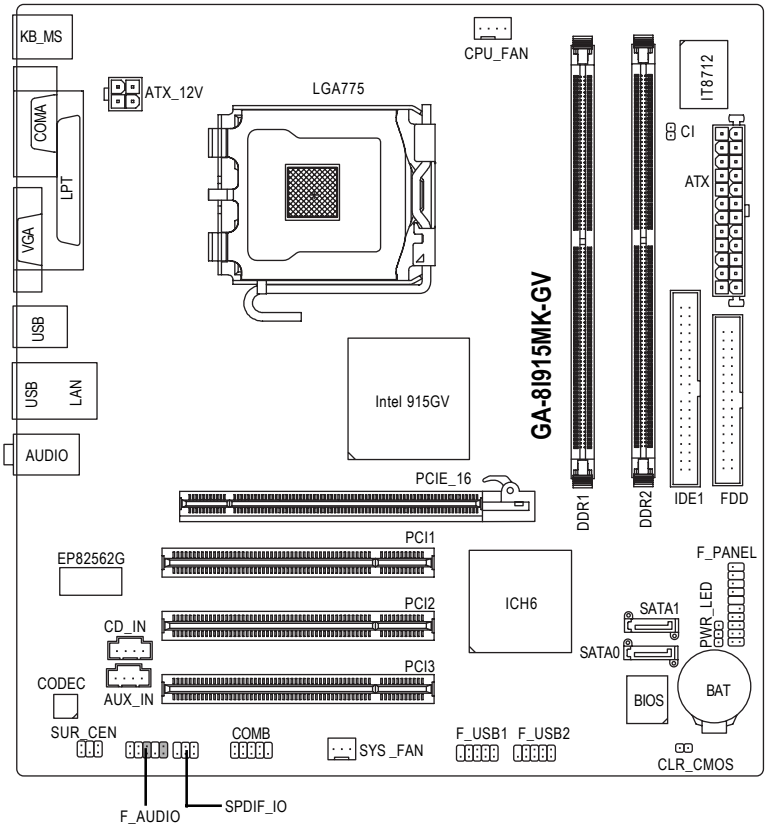
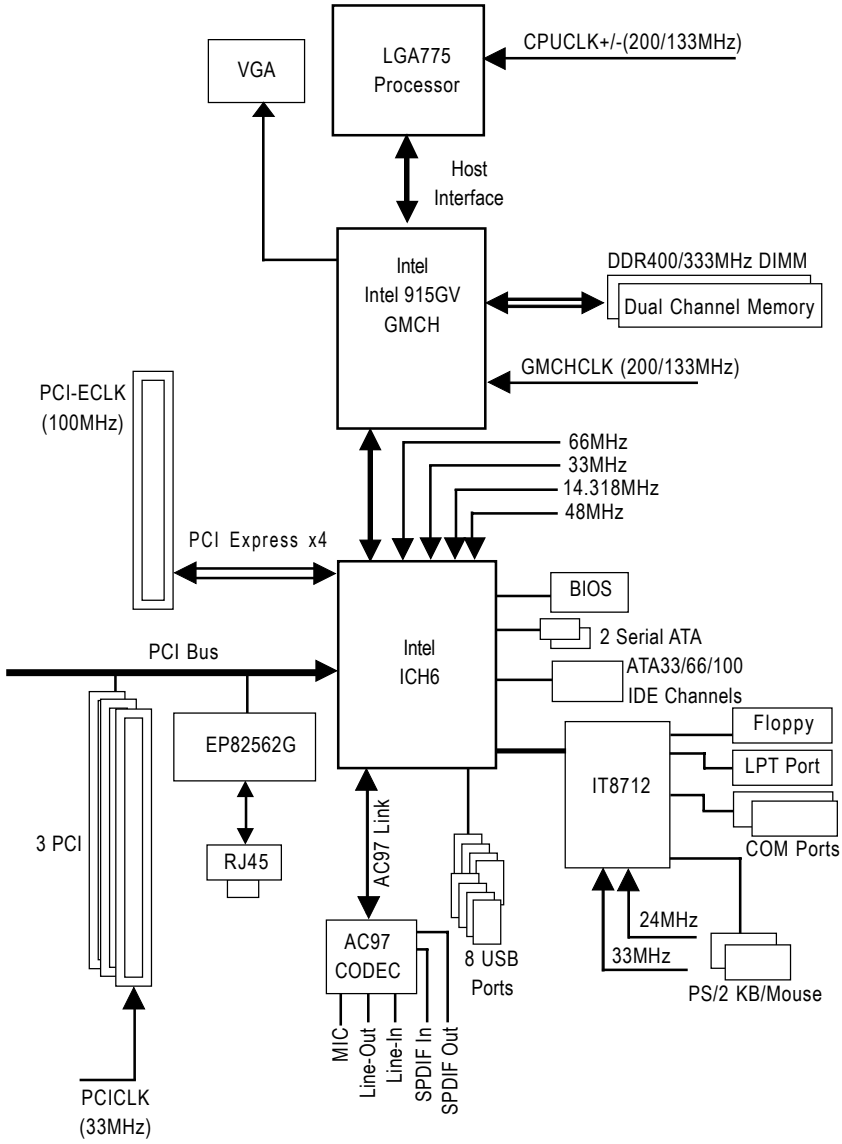
GA-8I915MK-GV Motherboard Layout



Block Diagram



Chapter 1 Hardware Installation

1-1 Considerations Prior to Installation

Preparing Your Computer

The motherboard contains numerous delicate electronic circuits and components which can become damaged as a result of electrostatic discharge (ESD). Thus, prior to installation, please follow the instructions below:

1. Please turn off the computer and unplug its power cord.
2. When handling the motherboard, avoid touching any metal leads or connectors.
3. It is best to wear an electrostatic discharge (ESD) cuff when handling electronic components (CPU, RAM).
4. Prior to installing the electronic components, please have these items on top of an antistatic pad or within a electrostatic shielding container.
5. Please verify that the power supply is switched off before unplugging the power supply connector from the motherboard.

Installation Notices

1. Prior to installation, please do not remove the stickers on the motherboard. These stickers are required for warranty validation.
2. Prior to the installation of the motherboard or any hardware, please first carefully read the information in the provided manual.
3. Before using the product, please verify that all cables and power connectors are connected.
4. To prevent damage to the motherboard, please do not allow screws to come in contact with the motherboard circuit or its components.
5. Please make sure there are no leftover screws or metal components placed on the motherboard or within the computer casing.
6. Please do not place the computer system on an uneven surface.
7. Turning on the computer power during the installation process can lead to damage to system components as well as physical harm to the user.
8. If you are uncertain about any installation steps or have a problem related to the use of the product, please consult a certified computer technician.

Instances of Non-Warranty

1. Damage due to natural disaster, accident or human cause.
2. Damage as a result of violating the conditions recommended in the user manual.
3. Damage due to improper installation.
4. Damage due to use of uncertified components.
5. Damage due to use exceeding the permitted parameters.
6. Product determined to be an unofficial Gigabyte product.

1-2 Feature Summary

CPU	◆	Supports the latest Intel® Pentium® 4 LGA775 CPU
	◆	Supports 533/800MHz FSB
	◆	L2 cache varies with processors
Chipset	◆	Northbridge: Intel® 915GV Express chipset
	◆	Southbridge: Intel® ICH6
	◆	Supported on the Win 2000/XP operating systems
Memory	◆	2 DDR DIMM memory slots (supports up to 2GB memory)
	◆	Supports dual channel DDR400/333 DIMM
	◆	Supports 2.5V DDR DIMM
Slots	◆	1 PCI Express x 16 slot (Note 1)
	◆	3 PCI slots
IDE Connections	◆	1 IDE connection (UDMA 33/ATA 66/ATA 100), allows connection of 2 IDE devices
Onboard SATA	◆	2 Serial ATA connections
	◆	Supported on the Win 2000/XP operating systems
FDD Connections	◆	1 FDD connection, allows connection of 2 FDD devices
Peripherals	◆	1 parallel port supporting Normal/EPP/ECP mode
	◆	1 VGA port, 1 COMA port, onboard COMB connection
	◆	8 USB 2.0/1.1 ports (rear x 4, front x 4 via cable)
	◆	1 front audio connector
	◆	1 PS/2 keyboard port
	◆	1 PS/2 mouse port
Onboard VGA	◆	Built-in Intel® 915GV Chipset
Onboard LAN	◆	Onboard EP82562G chip (10/100 Mbit)
	◆	1 RJ45 port
Onboard Audio	◆	Realtek ALC655 CODEC
	◆	Supports Line In ; Line Out ; MIC In
	◆	Supports 2 / 4 / 6 channel audio
	◆	SPDIF In / Out connection
	◆	CD In / AUX In connection
I/O Control	◆	IT8712

(Note 1) This model supports transfer up to PCI Express x4 mode.

Hardware Monitor	◆	System voltage detection
	◆	CPU temperature detection
	◆	CPU / System fan speed detection
	◆	CPU warning temperature
	◆	CPU / System fan failure warning
	◆	CPU smart fan control
BIOS	◆	Use of licensed AWARD BIOS
	◆	Supports Q-Flash
Additional Features	◆	Supports @BIOS
	◆	Supports EasyTune (Note 2)
Overclocking	◆	Over Clock via BIOS (CPU/DIMM/PCIE)
	◆	Over Voltage via BIOS (CPU/DIMM/PCIE/FSB)
Form Factor	◆	Micro-ATX form factor; 24.4cm x 21.5cm

(Note 2) EasyTune functions may vary depending on different motherboards.

1-3 Installation of the CPU and Heatsink

CAUTION

Before installing the CPU, please comply with the following conditions:

1. Please make sure that the motherboard supports the CPU.
2. Please take note of the one indented corner of the CPU. If you install the CPU in the wrong direction, the CPU will not insert properly. If this occurs, please change the insert direction of the CPU.
3. Please add an even layer of heat sink paste between the CPU and heatsink.
4. Please make sure the heatsink is installed on the CPU prior to system use, otherwise overheating and permanent damage of the CPU may occur.
5. Please set the CPU host frequency in accordance with the processor specifications. It is not recommended that the system bus frequency be set beyond hardware specifications since it does not meet the required standards for the peripherals. If you wish to set the frequency beyond the proper specifications, please do so according to your hardware specifications including the CPU, graphics card, memory, hard drive, etc.

NOTE

HT functionality requirement content :

Enabling the functionality of Hyper-Threading Technology for your computer system requires all of the following platform components:

- CPU: An Intel® Pentium 4 Processor with HT Technology
- Chipset: An Intel® Chipset that supports HT Technology
- BIOS: A BIOS that supports HT Technology and has it enabled
- OS: An operation system that has optimizations for HT Technology

1-3-1 Installation of the CPU

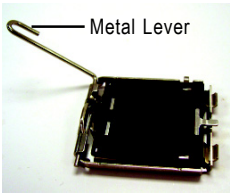


Fig. 1
Gently lift the metal lever located on the CPU socket to the upright position.

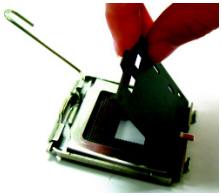


Fig. 2
Remove the plastic covering on the CPU socket.

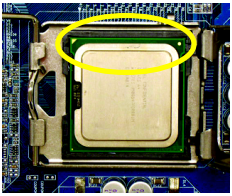


Fig. 3
Notice the small gold colored triangle located on the edge of the CPU socket. Align the indented corner of the CPU with the triangle and gently insert the CPU into position. (Grasping the CPU firmly between your thumb and forefinger, carefully place it into the socket in a straight and downwards motion. Avoid twisting or bending motions that might cause damage to the CPU during installation.)

Fig. 4
Once the CPU is properly inserted, please replace the load plate and push the metal lever back into its original position.

1-3-2 Installation of the Heatsink

Fig.1
Please apply an even layer of heatsink paste on the surface of the installed CPU.

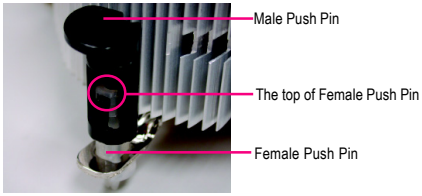


Fig. 2
(Turning the push pin along the direction of arrow is to remove the heatsink, on the contrary, is to install.)
Please note the direction of arrow sign on the male push pin doesn't face inwards before installation. (This instruction is only for Intel boxed fan)

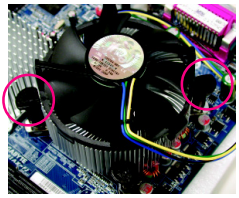


Fig. 3
Place the heatsink atop the CPU and make sure the push pins aim to the pin hole on the motherboard.Pressing down the push pins diagonally.

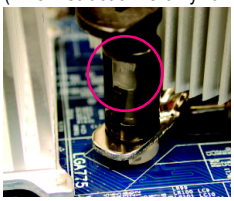


Fig. 4
Please make sure the Male and Female push pin are joined closely. (for detailed installation instructions, please refer to the heatsink installation section of the user manual)

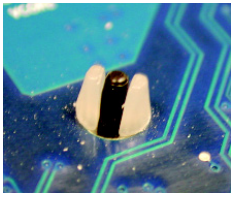


Fig. 5
Please check the back of motherboard after installing. If the push pin is inserted as the picture, the installation is complete.

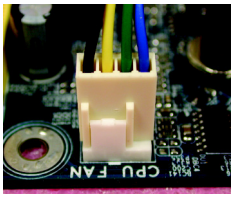


Fig. 6
Finally, please attach the power connector of the heatsink to the CPU fan header located on the motherboard.

NOTE The heatsink may adhere to the CPU as a result of hardening of the heatsink paste.To prevent such an occurrence, it is suggested that either thermal tape rather than heat sink paste be used for heat dissipation or using extreme care when removing the heatsink.

1-4 Installation of Memory

CAUTION

Before installing the memory modules, please comply with the following conditions:

1. Please make sure that the memory used is supported by the motherboard. It is recommended that memory of similar capacity, specifications and brand be used.
2. Before installing or removing memory modules, please make sure that the computer power is switched off to prevent hardware damage.
3. Memory modules have a foolproof insertion design. A memory module can be installed in only one direction. If you are unable to insert the module, please switch the direction.

The motherboard has 2 dual inline memory module (DIMM) sockets. The BIOS will automatically detects memory type and size. To install the memory module, just push it vertically into the DIMM socket. The DIMM module can only fit in one direction due to the notch. Memory size can vary between sockets.

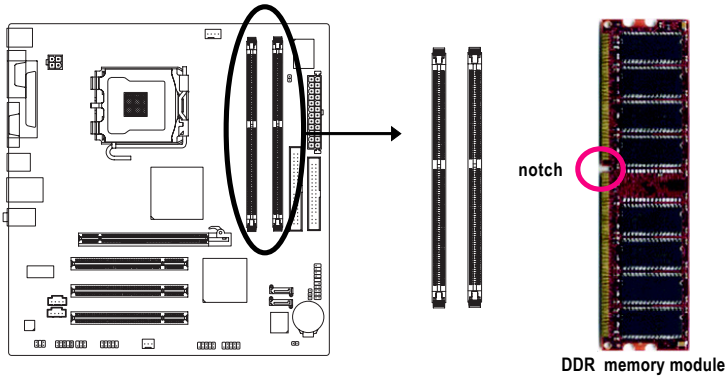


Fig.1
The DIMM socket has a notch, so the DIMM memory module can only fit in one direction. Insert the DIMM memory module vertically into the DIMM socket. Then push it down.

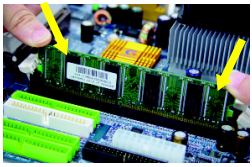


Fig. 1

Fig.2
Close the plastic clip at both edges of the DIMM sockets to lock the DIMM module.
Reverse the installation steps when you wish to remove the DIMM module.

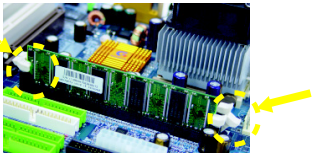


Fig. 2

Dual Channel DDR

GA-8I915MK-GV supports the Dual Channel Technology. After operating the Dual Channel Technology, the bandwidth of Memory Bus will add double.

GA-8I915MK-GV includes 2 DIMM sockets, and each Channel has two DIMM sockets as following:

- Channel A : DIMM1
- Channel B : DIMM2

If you want to operate the Dual Channel Technology, please note the following explanations due to the limitation of Intel chipset specifications.

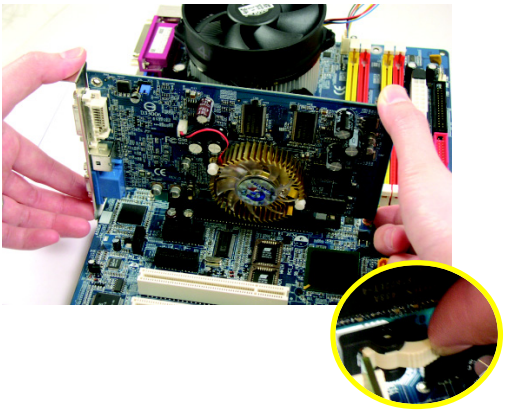
1. If one DDR memory modules are installed: The Dual Channel Technolog cannot operate when one DDR memory modules are installed.
2. If two DDR memory modules are installed, please use memory of the same storage capacity in order to use dual channel memory and for BIOS to detect all the DDR memory modules.

1-5 Installation of Expansion Cards

You can install your expansion card by following the steps outlined below:

1. Read the related expansion card's instruction document before installing the expansion card into the computer.
2. Remove your computer's chassis cover, screws and slot bracket from the computer.
3. Press the expansion card firmly into expansion slot in motherboard.
4. Be sure the metal contacts on the card are indeed seated in the slot.
5. Replace the screw to secure the slot bracket of the expansion card.
6. Replace your computer's chassis cover.
7. Power on the computer, if necessary, setup BIOS utility of expansion card from BIOS.
8. Install related driver from the operating system.

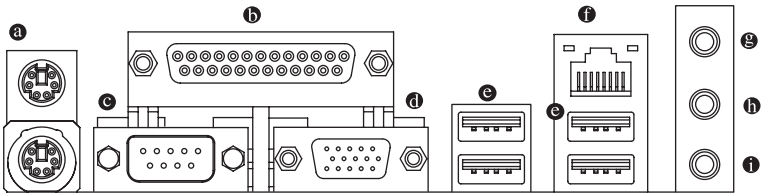
Installing a PCI Express x 16 expansion card:



CAUTION

Please align the VGA card to the onboard PCI Express x 16 slot and press firmly down on the slot. Make sure your VGA card is locked by the latch at the end of the PCI Express x 16 slot. When you try uninstall the VGA card, please press the latch as the picture to the left shows to release the card.

1-6 I/O Back Panel Introduction



a PS/2 Keyboard and PS/2 Mouse Connector

To install a PS/2 port keyboard and mouse, plug the mouse to the upper port (green) and the keyboard to the lower port (purple).

b Parallel Port

The parallel port allows connection of a printer, scanner and other peripheral devices.

c Serial Port

Devices like mouses, modems, and etc. can be connected to Serial port.

d VGA Port

Monitor can be connected to VGA port.

e USB port

Before you connect your device(s) into USB connector(s), please make sure your device(s) such as USB keyboard, mouse, scanner, zip, speaker...etc. have a standard USB interface. Also make sure your OS supports USB controller. If your OS does not support USB controller, please contact OS vendor for possible patch or driver upgrade. For more information please contact your OS or device(s) vendors.

f LAN Port

The provided Internet connection is fast Ethernet, providing data transfer speeds of 10/100Mbps.

g Line In

Devices like CD-ROM, walkman etc. can be connected to Line In jack.

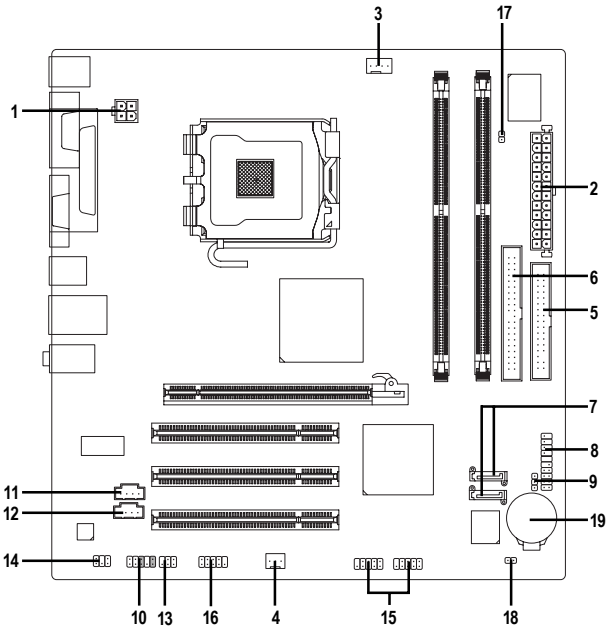
h Line Out (Front Speaker Out)

Connect the stereo speakers, earphone or front surround channels to this connector.

i MIC In

Microphone can be connected to MIC In jack.

1-7 Connectors Introduction



1)	ATX_12V	11)	CD_IN
2)	ATX (Power Connector)	12)	AUX_IN
3)	CPU_FAN	13)	SPDIF_IO
4)	SYS_FAN	14)	SUR_CEN
5)	FDD	15)	F_USB1 / F_USB2
6)	IDE1	16)	COMB
7)	SATA0 / SATA1	17)	CI
8)	F_PANEL	18)	CLR_CMOS
9)	PWR_LED	19)	BAT
10)	F_AUDIO		

1/2) ATX_12V/ATX (Power Connector)

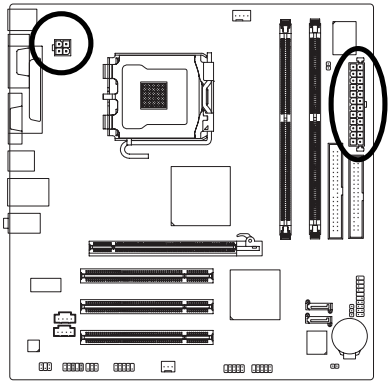
With the use of the power connector, the power supply can supply enough stable power to all the components on the motherboard. Before connecting the power connector, please make sure that all components and devices are properly installed. Align the power connector with its proper location on the motherboard and connect tightly.

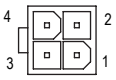
The ATX_12V power connector mainly supplies power to the CPU. If the ATX_12V power connector is not connected, the system will not start.

Caution!

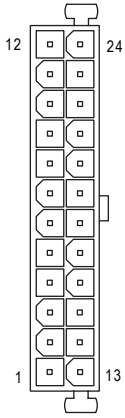
Please use a power supply that is able to handle the system voltage requirements. It is recommended that a power supply that can withstand high power consumption be used (300W or greater). If a power supply is used that does not provide the required power, the result can lead to an unstable system or a system that is unable to start.

If you use a 24-pin ATX power supply, please remove the small cover on the power connector on the motherboard before plugging in the power cord ; Otherwise, please do not remove it.





Pin No.	Definition
1	GND
2	GND
3	+12V
4	+12V



Pin No.	Definition
1	3.3V
2	3.3V
3	GND
4	+5V
5	GND
6	+5V
7	GND
8	Power Good
9	5V SB(stand by +5V)
10	+12V
11	+12V(Only for 24pins ATX)
12	3.3V(Only for 24pins ATX)
13	3.3V
14	-12V
15	GND
16	PS_ON(soft On/Off)
17	GND
18	GND
19	GND
20	-5V
21	+5V
22	+5V
23	+5V(Only for 24pins ATX)
24	GND(Only for 24pins ATX)

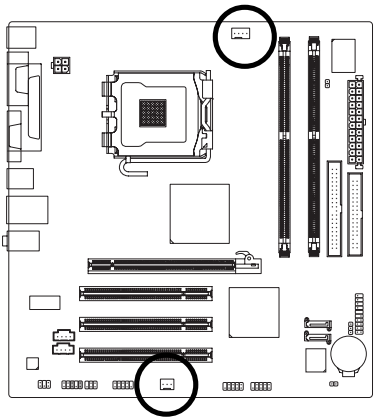
3/4) CPU_FAN / SYS_FAN (Cooler Fan Power Connector)

The cooler fan power connector supplies a +12V power voltage via a 3-pin/4-pin (only for CPU_FAN) power connector and possesses a fool-proof connection design.

Most coolers are designed with color-coded power connector wires. A red power connector wire indicates a positive connection and requires a +12V power voltage. The black connector wire is the ground wire (GND).

Please remember to connect the power to the cooler to prevent system overheating and failure.

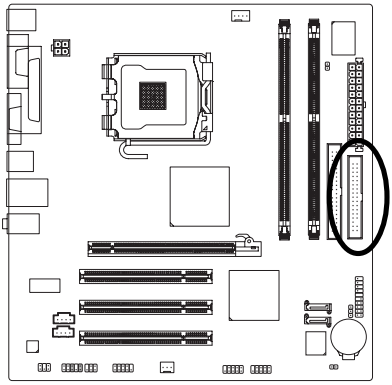
Caution! Please remember to connect the power to the CPU fan to prevent CPU overheating and failure.

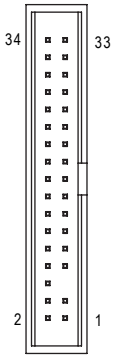


Pin No.	Definition
1	GND
2	+12V
3	Sense
4	Speed Control (Only for CPU_FAN)

5) FDD (FDD Connector)

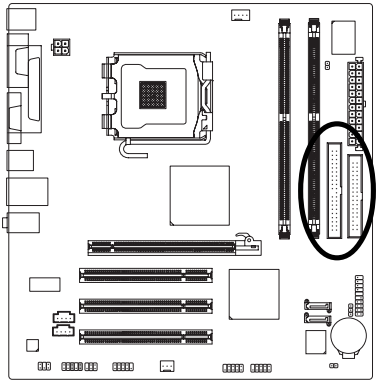
The FDD connector is used to connect the FDD cable while the other end of the cable connects to the FDD drive. The types of FDD drives supported are: 360KB, 720KB, 1.2MB, 1.44MB and 2.88MB. Please connect the red power connector wire to the pin1 position.

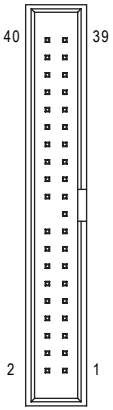




6) IDE1 (IDE Connector)

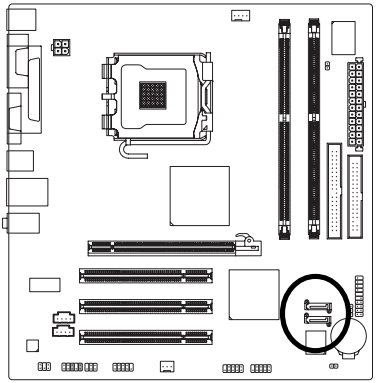
An IDE device connects to the computer via an IDE connector. One IDE connector can connect to one IDE cable, and the single IDE cable can then connect to two IDE devices (hard drive or optical drive). If you wish to connect two IDE devices, please set the jumper on one IDE device as Master and the other as Slave (for information on settings, please refer to the instructions located on the IDE device).





7) SATA0/SATA1 (Serial ATA Connector)

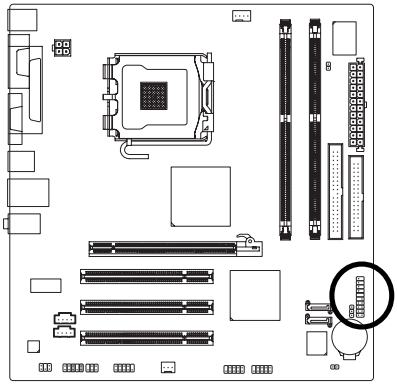
Serial ATA can provide up to 150MB/s transfer rate. Please refer to the BIOS setting for the Serial ATA and install the proper driver in order to work properly.

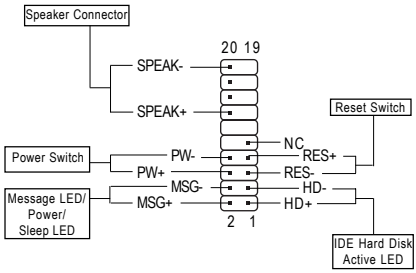


Pin No.	Definition
1	GND
2	TXP
3	TXN
4	GND
5	RXN
6	RXP
7	GND

8) F_PANEL (Front Panel Connector)

Please connect the power LED, PC speaker, reset switch and power switch etc. of your chassis front panel to the F_PANEL connector according to the pin assignments below.

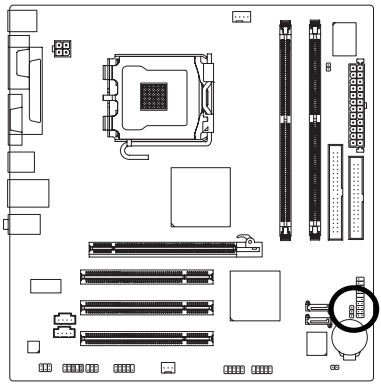




HD (IDE Hard Disk Active LED)	Pin 1: LED anode(+) Pin 2: LED cathode(-)
SPEAK (Speaker Connector)	Pin 1: Power Pin 2- Pin 3: NC Pin 4: Data(-)
RES (Reset Switch)	Open: Normal Close: Reset Hardware System
PW (Power Switch)	Open: Normal Close: Power On/Off
MSG(Message LED/Power/Sleep LED)	Pin 1: LED anode(+) Pin 2: LED cathode(-)
NC	NC

9) PWR_LED

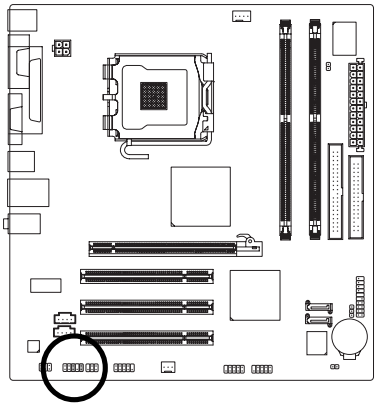
PWR_LED is connected with the system power indicator to indicate whether the system is on/off. It will blink when the system enters suspend mode.



Pin No.	Definition
1	MPD+
2	MPD-
3	MPD-

10) F_AUDIO (Front Audio Panel Connector)

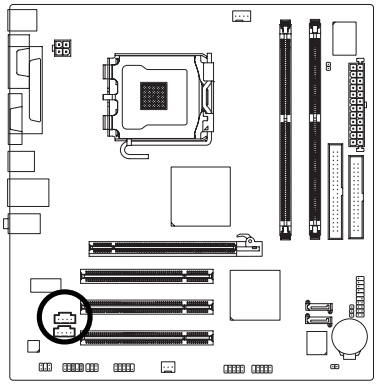
Please make sure the pin assigment on the cable is the same as the pin assigment on the MB header. To find out if the chassis you are buying support front audio panel connector, please contact your dealer. If you want to use "Front Audio" connector, you must remove the jumpers from pins 5-6, 9-10.



Pin No.	Definition
1	MIC
2	GND
3	MIC_BIAS
4	POWER
5	FrontAudio(R)
6	Rear Audio (R)/ Return R
7	NC
8	No Pin
9	FrontAudio (L)
10	Rear Audio (L)/ Return L

11) CD_IN (CD IN Connector)

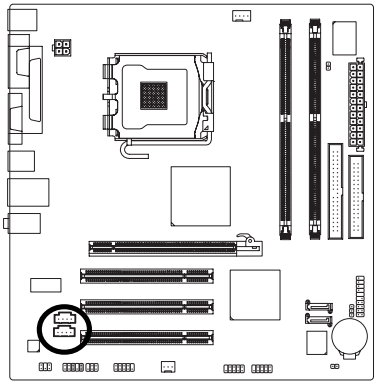
Connect CD-ROM or DVD-ROM audio out to the connector.



Pin No.	Definition
1	CD-L
2	GND
3	GND
4	CD-R

12) AUX_IN (AUX In Connector)

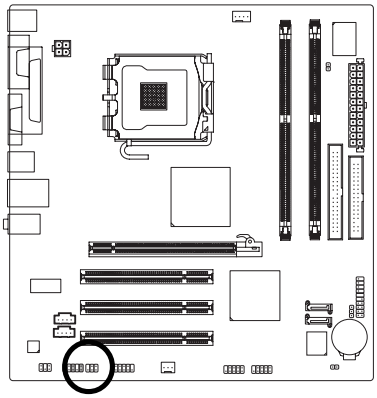
Connect other device (such as PCI TV Tunner audio out) to the connector.



Pin No.	Definition
1	AUX-L
2	GND
3	GND
4	AUX-R

13) SPDIF_IO (SPDIF In/ Out)

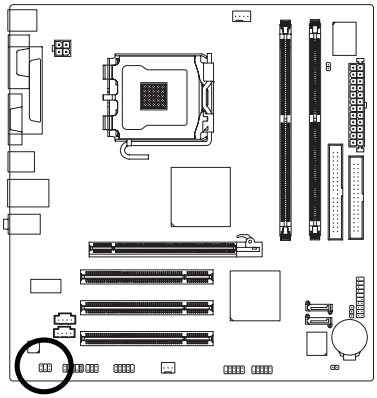
The SPDIF output is capable of providing digital audio to external speakers or compressed AC3 data to an external Dolby Digital Decoder. Use this feature only when your stereo system has digital input function. Use SPDIF IN feature only when your device has digital output function. Be careful with the polarity of the SPDIF_IO connector. Check the pin assignment carefully while you connect the SPDIF cable. Incorrect connection between the cable and connector will make the device unable to work or even damage it. For optional SPDIF cable, please contact your local dealer.



Pin No.	Definition
1	Power
2	No Pin
3	SPDIF
4	SPDIFI
5	GND
6	GND

14) SUR_CEN

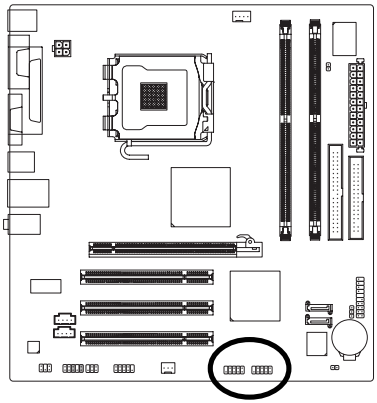
Please contact your nearest dealer for optional SUR_CEN cable.



Pin No.	Definition
1	SUR OUTL
2	SUR OUTR
3	GND
4	No Pin
5	CENTER_OUT
6	BASS_OUT

15) F_USB1 / F_USB2 (Front USB Connectors)

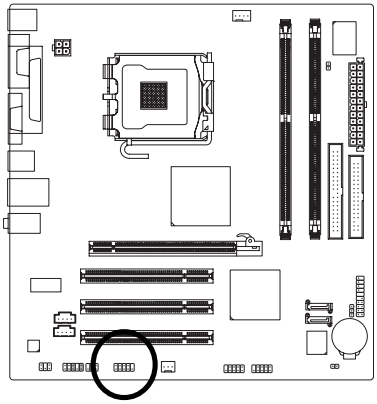
Be careful with the polarity of the front USB connector. Check the pin assignment carefully while you connect the front USB cable, incorrect connection between the cable and connector will make the device unable to work or even damage it. For optional front USB cable, please contact your local dealer.



Pin No.	Definition
1	Power
2	Power
3	USB0 DX-
4	USB1 Dy-
5	USB0 DX+
6	USB1 Dy+
7	GND
8	GND
9	No Pin
10	NC

16) COMB (COMB Connector)

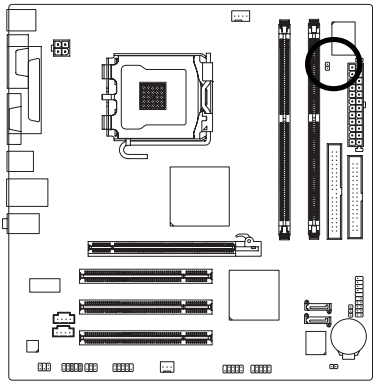
Be careful with the polarity of the COMB connector. Check the pin assignments while you connect the COMB cable. Please contact your nearest dealer for optional COMB cable.



Pin No.	Definition
1	NDCDB-
2	NSINB
3	NSOUTB
4	NDTRB-
5	GND
6	NDSRB-
7	NRTSB-
8	NCTSB-
9	NRIB-
10	No Pin

17) CI (Chassis Intrusion, Case Open)

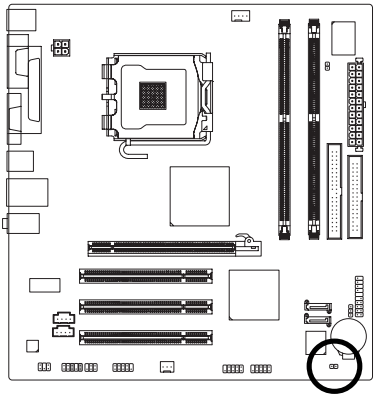
This 2-pin connector allows your system to detect if the chassis cover is removed. You can check the "Case Opened" status in BIOS Setup.



Pin No.	Definition
1	GND
2	Signal

18) CLR_CMOS (Clear CMOS)

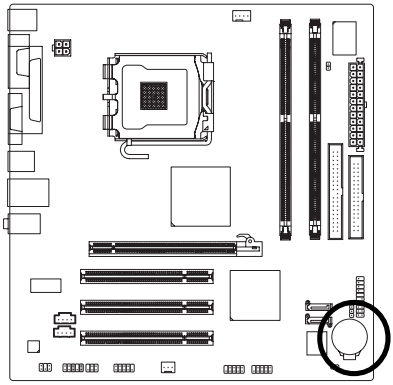
You may clear the CMOS data to its default values by this jumper. To clear CMOS, temporarily short pins 1-2. To prevent improper use of this header, we do not include a jumper on it.

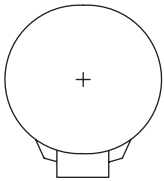


Open: Normal

Short: Clear CMOS

19) BAT (Battery)





- ❖ Danger of explosion if battery is incorrectly replaced.
- ❖ Replace only with the same or equivalent type recommended by the manufacturer.
- ❖ Dispose of used batteries according to the manufacturer's instructions.

If you want to erase CMOS...

1. Turn OFF the computer and unplug the power cord.
2. Take out the battery gently and put it aside for about 10 minutes (Or you can use a metal object to connect the positive and negative pins in the battery holder to make them short for one minute).
3. Re-install the battery.
4. Plug the power cord and turn ON the computer.

Chapter 2 BIOS Setup

BIOS (Basic Input and Output System) includes a CMOS SETUP utility which allows user to configure required settings or to activate certain system features.
The CMOS SETUP saves the configuration in the CMOS SRAM of the motherboard.
When the power is turned off, the battery on the motherboard supplies the necessary power to the CMOS SRAM.
When the power is turned on, pushing the <Del> button during the BIOS POST (Power-On Self Test) will take you to the CMOS SETUP screen. You can enter the BIOS setup screen by pressing "Ctrl + F1".
When setting up BIOS for the first time, it is recommended that you save the current BIOS to a disk in the event that BIOS needs to be reset to its original settings. If you wish to upgrade to a new BIOS, either Gigabyte's Q-Flash or @BIOS utility can be used.
Q-Flash allows the user to quickly and easily update or backup BIOS without entering the operating system.
@BIOS is a Windows-based utility that does not require users to boot to DOS before upgrading BIOS but directly download and update BIOS from the Internet.

CONTROL KEYS

< ↑ >< ↓ >< ← >< → >	Move to select item
<Enter>	Select Item
<Esc>	Main Menu - Quit and not save changes into CMOS Status Page Setup Menu and Option Page Setup Menu - Exit current page and return to Main Menu
<Page Up>	Increase the numeric value or make changes
<Page Down>	Decrease the numeric value or make changes
<F1>	General help, only for Status Page Setup Menu and Option Page Setup Menu
<F2>	Item Help
<F5>	Restore the previous CMOS value from CMOS, only for Option Page Setup Menu
<F6>	Load the file-safe default CMOS value from BIOS default table
<F7>	Load the Optimized Defaults
<F8>	Q-Flash utility
<F9>	System Information
<F10>	Save all the CMOS changes, only for Main Menu

Main Menu

The on-line description of the highlighted setup function is displayed at the bottom of the screen.

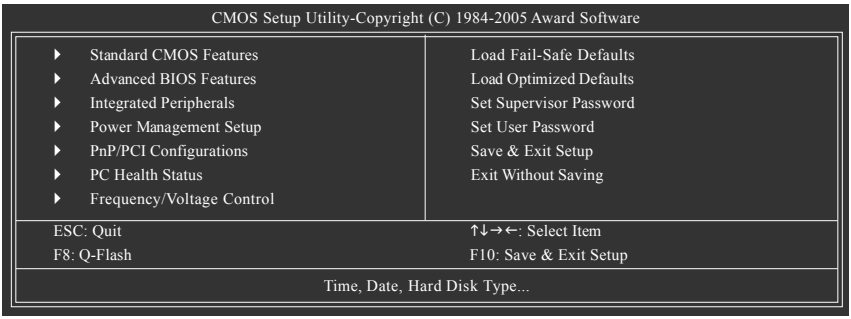
Status Page Setup Menu / Option Page Setup Menu

Press F1 to pop up a small help window that describes the appropriate keys to use and the possible selections for the highlighted item. To exit the Help Window press <Esc>.

NOTE The BIOS Setup menus described in this chapter are for reference only and may differ from the exact settings for your motherboard.

The Main Menu (For example: BIOS Ver. : F1)

Once you enter Award BIOS CMOS Setup Utility, the Main Menu (as figure below) will appear on the screen. Use arrow keys to select among the items and press <Enter> to accept or enter the sub-menu.



NOTE If you can't find the setting you want, please press "Ctrl+F1" to search the advanced option hidden.

Please Load Optimized Defaults in the BIOS when somehow the system works not stable as usual. This action makes the system reset to the default for stability.

- **Standard CMOS Features**

  This setup page includes all the items in standard compatible BIOS.
- **Advanced BIOS Features**

  This setup page includes all the items of Award special enhanced features.
- **Integrated Peripherals**

  This setup page includes all onboard peripherals.
- **Power Management Setup**

  This setup page includes all the items of Green function features.
- **PnP/PCI Configuration**

  This setup page includes all the configurations of PCI & PnP ISA resources.
- **PC Health Status**

  This setup page is the System auto detect Temperature, voltage, fan, speed.
- **Frequency / Voltage Control**

  This setup page is control CPU clock and frequency ratio.
- **Load Fail-Safe Defaults**

  Fail-Safe Defaults indicates the value of the system parameters which the system would be in safe configuration.

- **Load Optimized Defaults**

  Optimized Defaults indicates the value of the system parameters which the system would be in best performance configuration.

- **Set Supervisor Password**

  Change, set, or disable password. It allows you to limit access to the system and Setup, or just to Setup.

- **Set User Password**

  Change, set, or disable password. It allows you to limit access to the system.

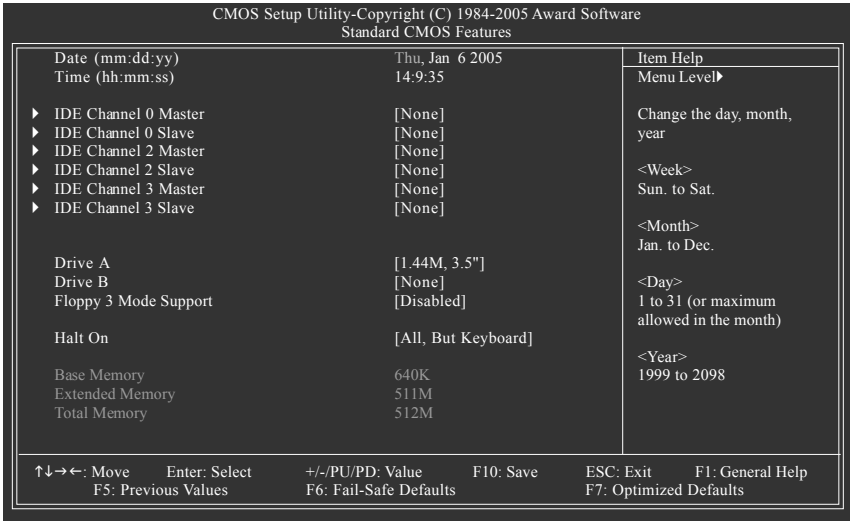
- **Save & Exit Setup**

  Save CMOS value settings to CMOS and exit setup.

- **Exit Without Saving**

  Abandon all CMOS value changes and exit setup.

2-1 Standard CMOS Features


CMOS Setup Utility-Copyright (C) 1984-2005 Award Software
Standard CMOS Features
Date (mm:dd:yy) Thu, Jan 6 2005
Time (hh:mm:ss) 14:9:35
IDE Channel 0 Master [None]
IDE Channel 0 Slave [None]
IDE Channel 2 Master [None]
IDE Channel 2 Slave [None]
IDE Channel 3 Master [None]
IDE Channel 3 Slave [None]
Drive A [1.44M, 3.5"]
Drive B [None]
Floppy 3 Mode Support [Disabled]
Halt On [All, But Keyboard]
Base Memory 640K
Extended Memory 511M
Total Memory 512M
Item Help
Menu Level
Change the day, month, year
<Week>
Sun. to Sat.
<Month>
Jan. to Dec.
<Day>
1 to 31 (or maximum allowed in the month)
<Year>
1999 to 2098
↑↓→←: Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

☞ **Date**

The date format is <week>, <month>, <day>, <year>.

- ⏩ Week The week, from Sun to Sat, determined by the BIOS and is display only
- ⏩ Month The month, Jan. Through Dec.
- ⏩ Day The day, from 1 to 31 (or the maximum allowed in the month)
- ⏩ Year The year, from 1999 through 2098

☞ **Time**

The times format in <hour> <minute> <second>. The time is calculated base on the 24-hour military-time clock. For example, 1 p.m. is 13:00:00.

☞ **IDE Channel 0 Master, Slave**

- IDE HDD Auto-Detection Press "Enter" to select this option for automatic device detection.
- IDE Device Setup. You can use one of three methods:
  - Auto — Allows BIOS to automatically detect IDE devices during POST(default)
  - None — Select this if no IDE devices are used and the system will skip the automatic detection step and allow for faster system start up.
  - Manual — User can manually input the correct settings
- Access Mode — Use this to set the access mode for the hard drive. The four options are: CHS/LBA/Large/Auto(default:Auto)

☞ **IDE Channel 2/3 Master, Slave**

- IDE HDD Auto-Detection Press "Enter" to select this option for automatic device detection.
- Extended IDE Drive SATA devices setup. You can use one of two methods:
  - Auto — Allows BIOS to automatically detect SATA IDE devices during POST. (Default value)
  - None — Select this if no SATA IDE devices are used and the system will skip the automatic detection step and allow for faster system start up.
- Access Mode — Use this to set the access mode for the hard drive. The two options are: Large/Auto(default:Auto)
- Capacity — Capacity of currently installed hard disk.

Hard drive information should be labeled on the outside drive casing. Enter the appropriate option based on this information.

- Cylinder — Number of cylinders
- Head — Number of heads
- Precomp — Write precomp
- Landing Zone — Landing zone
- Sector — Number of sectors

☞ **Drive A / Drive B**

The category identifies the types of floppy disk drive A or drive B that has been installed in the computer.

- None — No floppy drive installed
- 360K, 5.25" — 5.25 inch PC-type standard drive; 360K byte capacity.
- 1.2M, 5.25" — 5.25 inch AT-type high-density drive; 1.2M byte capacity (3.5 inch when 3 Mode is Enabled).
- 720K, 3.5" — 3.5 inch double-sided drive; 720K byte capacity
- 1.44M, 3.5" — 3.5 inch double-sided drive; 1.44M byte capacity.
- 2.88M, 3.5" — 3.5 inch double-sided drive; 2.88M byte capacity.

☞ **Floppy 3 Mode Support (for Japan Area)**

- Disabled — Normal Floppy Drive. (Default value)
- Drive A — Drive A is 3 mode Floppy Drive.
- Drive B — Drive B is 3 mode Floppy Drive.
- Both — Drive A & B are 3 mode Floppy Drives.

☞ **Halt on**

The category determines whether the computer will stop if an error is detected during power up.

⏩ No Errors	The system boot will not stop for any error that may be detected and you will be prompted.
⏩ All Errors	Whenever the BIOS detects a non-fatal error the system will be stopped.
⏩ All, But Keyboard	The system boot will not stop for a keyboard error; it will stop for all other errors. (Default value)
⏩ All, But Diskette	The system boot will not stop for a disk error; it will stop for all other errors.
⏩ All, But Disk/Key	The system boot will not stop for a keyboard or disk error; it will stop for all other errors.

☞ **Memory**

The category is display-only which is determined by POST (Power On Self Test) of the BIOS.

⏩ **Base Memory**

The POST of the BIOS will determine the amount of base (or conventional) memory installed in the system.

The value of the base memory is typically 512K for systems with 512K memory installed on the motherboard, or 640K for systems with 640K or more memory installed on the motherboard.

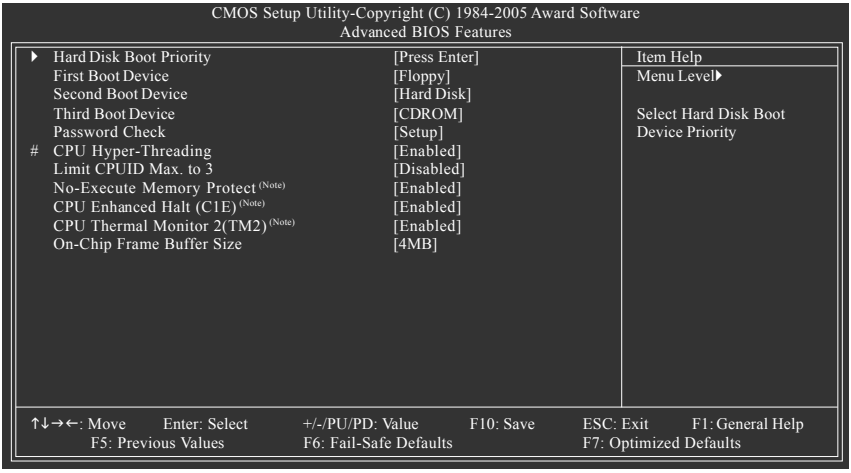
⏩ **Extended Memory**

The BIOS determines how much extended memory is present during the POST.

⏩ **Total Memory**

This item displays the memory size that used.

2-2 Advanced BIOS Features


CMOS Setup Utility-Copyright (C) 1984-2005 Award Software
Advanced BIOS Features
Hard Disk Boot Priority [Press Enter]
First Boot Device [Floppy]
Second Boot Device [Hard Disk]
Third Boot Device [CDROM]
Password Check [Setup]
CPU Hyper-Threading [Enabled]
Limit CPUID Max. to 3 [Disabled]
No-Execute Memory Protect (Note) [Enabled]
CPU Enhanced Halt (C1E) (Note) [Enabled]
CPU Thermal Monitor 2(TM2) (Note) [Enabled]
On-Chip Frame Buffer Size [4MB]
Item Help
Menu Level
Select Hard Disk Boot Device Priority
↑↓→←: Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

NOTE " # " System will detect automatically and show up when you install the Intel® Pentium® 4 processor with HT Technology.

☞ Hard Disk Boot Priority

Select boot sequence for onboard(or add-on cards) SCSI, RAID, etc.

Use <↑> or <↓> to select a device, then press<+> to move it up, or <-> to move it down the list. Press <ESC> to exit this menu.

☞ First / Second / Third Boot Device

⏩ Floppy	Select your boot device priority by Floppy.
⏩ LS120	Select your boot device priority by LS120.
⏩ Hard Disk	Select your boot device priority by Hard Disk.
⏩ CDROM	Select your boot device priority by CDROM.
⏩ ZIP	Select your boot device priority by ZIP.
⏩ USB-FDD	Select your boot device priority by USB-FDD.
⏩ USB-ZIP	Select your boot device priority by USB-ZIP.
⏩ USB-CDROM	Select your boot device priority by USB-CDROM.
⏩ USB-HDD	Select your boot device priority by USB-HDD.
⏩ LAN	Select your boot device priority by LAN.
⏩ Disabled	Disable this function.

(Note) This item will show up when you install a processor which supports this function.

☞ **Password Check**

- ⏩ Setup — The system will boot but will not access to Setup page if the correct password is not entered at the prompt. (Default value)
- ⏩ System — The system will not boot and will not access to Setup page if the correct password is not entered at the prompt.

If you want to cancel the setting of password, please just press ENTER to make [SETUP] empty.

☞ **CPU Hyper-Threading**

- ⏩ Enabled — Enables CPU Hyper Threading Feature. Please note that this feature is only working for operating system with multi processors mode supported. (Default value)
- ⏩ Disabled — Disables CPU Hyper Threading.

☞ **Limit CPUID Max. to 3**

- ⏩ Enabled — Limit CPUID Maximum value to 3 when use older OS like NT4.
- ⏩ Disabled — Disables CPUID Limit for windows XP. (Default value)

☞ **No-Execute Memory Protect** (Note)

- ⏩ Enabled — Enables No-Execute Memory Protect function. (Default value)
- ⏩ Disabled — Disables No-Execute Memory Protect function.

☞ **CPU Enhanced Halt (C1E)** (Note)

- ⏩ Enabled — Enables CPU Enhanced Halt (C1E) function. (Default value)
- ⏩ Disabled — Disables CPU Enhanced Halt (C1E) function.

☞ **CPU Thermal Monitor 2 (TM2)** (Note)

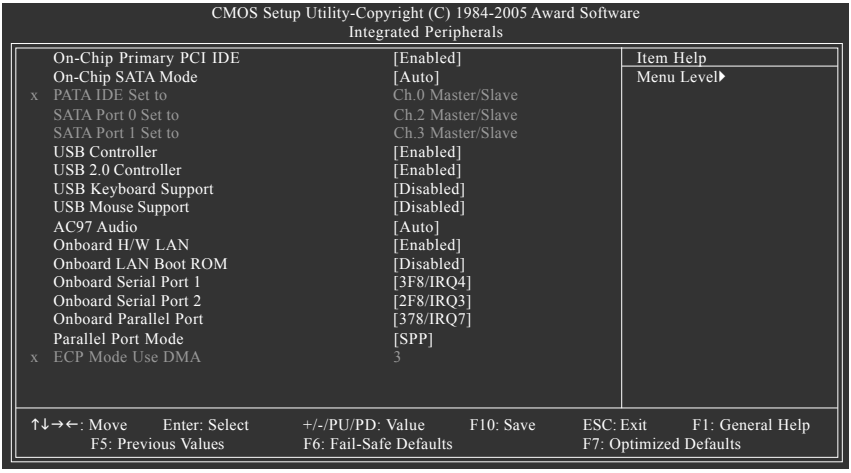
- ⏩ Enabled — Enable CPU Thermal Monitor 2 (TM2) function. (Default value)
- ⏩ Disabled — Disable CPU Thermal Monitor 2 (TM2) function.

☞ **On-Chip Frame Buffer Size**

- ⏩ 1MB — Set On-chip frame buffer size to 1MB.
- ⏩ 4MB — Set On-chip frame buffer size to 4MB. (Default value)
- ⏩ 8MB — Set On-chip frame buffer size to 8MB.
- ⏩ 16MB — Set On-chip frame buffer size to 16MB.
- ⏩ 32MB — Set On-chip frame buffer size to 32MB.

(Note) This item will show up when you install a processor which supports this function.

2-3 Integrated Peripherals


CMOS Setup Utility-Copyright (C) 1984-2005 Award Software
Integrated Peripherals
On-Chip Primary PCI IDE [Enabled]
On-Chip SATA Mode [Auto]
x PATA IDE Set to Ch.0 Master/Slave
SATA Port 0 Set to Ch.2 Master/Slave
SATA Port 1 Set to Ch.3 Master/Slave
USB Controller [Enabled]
USB 2.0 Controller [Enabled]
USB Keyboard Support [Disabled]
USB Mouse Support [Disabled]
AC97 Audio [Auto]
Onboard H/W LAN [Enabled]
Onboard LAN Boot ROM [Disabled]
Onboard Serial Port 1 [3F8/IRQ4]
Onboard Serial Port 2 [2F8/IRQ3]
Onboard Parallel Port [378/IRQ7]
Parallel Port Mode [SPP]
x ECP Mode Use DMA 3
Item Help
Menu Level
↑↓→←: Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

☞ **On-Chip Primary PCI IDE**

- ⏩ Enabled — Enable onboard 1st channel IDE port. (Default value)
- ⏩ Disabled — Disable onboard 1st channel IDE port.

☞ **On-Chip SATA Mode**

- ⏩ Disabled — Disable this function.
- ⏩ Auto — BIOS will auto detect. (Default value)
- ⏩ Combined — Set On-Chip SATA mode to Combined, you can use up to 4 HDDs on the motherboard; 2 for SATA and the other for PATA.
- ⏩ Enhanced — Set On-Chip SATA mode to Enhanced, the motherboard allows up to 6 HDDs to use; 4 SATA HDDs plus PATA HDDs.
- ⏩ Non-Combined — Set On-Chip SATA mode to Non-Combined, SATA will be simulated to PATA mode. Support a maximum of 4 SATA devices. PATA devices will be ignored.

☞ **PATA IDE Set to**

- ⏩ Ch.1 Master/Slave — Set PATA IDE to Ch. 1 Master/Slave.
- ⏩ Ch.0 Master/Slave — Set PATA IDE to Ch. 0 Master/Slave. (Default value)

☞ **SATA Port 0 Set to**

⏩ This value will auto make by the setting "On-Chip SATA Mode" and "PATA IDE Set to".
If PATA IDE were set to Ch. 1 Master/Slave, this function will auto set to Ch. 0 Master/Slave.

☞ **SATA Port 1 Set to**

⏩ This value will auto make by the setting "On-Chip SATA Mode" and "PATA IDE Set to".
If PATA IDE were set to Ch. 0 Master/Slave, this function will auto set to Ch. 1 Master/Slave.

☞ **USB Controller**

- ⏩ Enabled — Enable USB Controller. (Default value)
- ⏩ Disabled — Disable USB Controller.

☞ **USB 2.0 Controller**

Disable this function if you are not using onboard USB 2.0 feature.

- ⏩ Enabled — Enable USB 2.0 Controller. (Default value)
- ⏩ Disabled — Disable USB 2.0 Controller.

☞ **USB Keyboard Support**

- ⏩ Enabled — Enable USB Keyboard Support.
- ⏩ Disabled — Disable USB Keyboard Support. (Default value)

☞ **USB Mouse Support**

- ⏩ Enabled — Enable USB Mouse Support.
- ⏩ Disabled — Disable USB Mouse Support. (Default value)

☞ **AC97 Audio**

- ⏩ Auto — Auto detect AC97 audio function. (Default value)
- ⏩ Disabled — Disable this function.

☞ **Onboard H/W LAN**

- ⏩ Enabled — Enable Onboard H/W LAN function. (Default value)
- ⏩ Disabled — Disable this function.

☞ **Onboard LAN Boot ROM**

This function decide whether to invoke the boot ROM of the onboard LAN chip.

- ⏩ Enabled — Enable this function.
- ⏩ Disabled — Disable this function. (Default value)

☞ **Onboard Serial Port 1**

- ⏩ Auto — BIOS will automatically setup the port 1 address.
- ⏩ 3F8/IRQ4 — Enable onboard Serial port 1 and address is 3F8/IRQ4. (Default value)
- ⏩ 2F8/IRQ3 — Enable onboard Serial port 1 and address is 2F8/IRQ3.
- ⏩ 3E8/IRQ4 — Enable onboard Serial port 1 and address is 3E8/IRQ4.
- ⏩ 2E8/IRQ3 — Enable onboard Serial port 1 and address is 2E8/IRQ3.
- ⏩ Disabled — Disable onboard Serial port 1.

☞ **Onboard Serial Port 2**

- ⏩ Auto — BIOS will automatically setup the port 2 address.
- ⏩ 3F8/IRQ4 — Enable onboard Serial port 2 and address is 3F8/IRQ4.
- ⏩ 2F8/IRQ3 — Enable onboard Serial port 2 and address is 2F8/IRQ3. (Default value)
- ⏩ 3E8/IRQ4 — Enable onboard Serial port 2 and address is 3E8/IRQ4.
- ⏩ 2E8/IRQ3 — Enable onboard Serial port 2 and address is 2E8/IRQ3.
- ⏩ Disabled — Disable onboard Serial port 2.

☞ **Onboard Parallel port**

- ⏩ Disabled — Disable onboard LPT port.
- ⏩ 378/IRQ7 — Enable onboard LPT port and address is 378/IRQ7. (Default value)
- ⏩ 278/IRQ5 — Enable onboard LPT port and address is 278/IRQ5.
- ⏩ 3BC/IRQ7 — Enable onboard LPT port and address is 3BC/IRQ7.

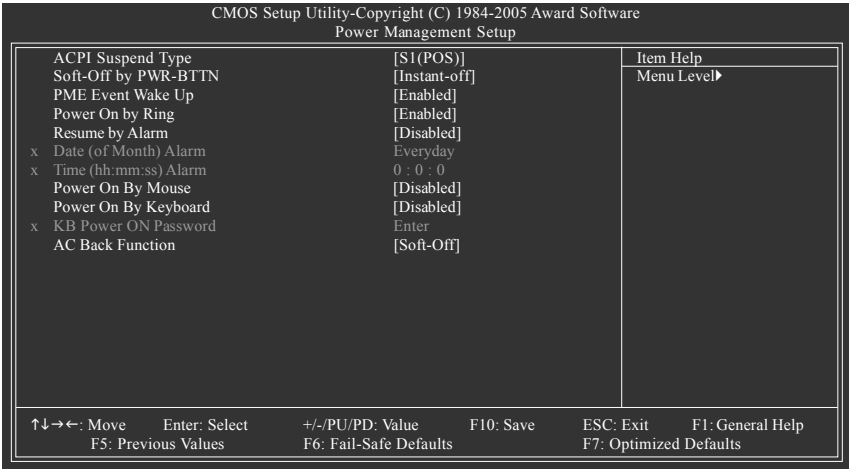
☞ **Parallel Port Mode**

- ⏩ SPP Using Parallel port as Standard Parallel Port. (Default value)
- ⏩ EPP Using Parallel port as Enhanced Parallel Port.
- ⏩ ECP Using Parallel port as Extended Capabilities Port.
- ⏩ ECP+EPP Using Parallel port as ECP & EPP mode.

☞ **ECP Mode Use DMA**

- ⏩ 3 Set ECP Mode Use DMA to 3. (Default value)
- ⏩ 1 Set ECP Mode Use DMA to 1.

2-4 Power Management Setup


CMOS Setup Utility-Copyright (C) 1984-2005 Award Software
Power Management Setup
ACPI Suspend Type [S1(POS)]
Soft-Off by PWR-BTTN [Instant-off]
PME Event Wake Up [Enabled]
Power On by Ring [Enabled]
Resume by Alarm [Disabled]
x Date (of Month) Alarm Everyday
x Time (hh:mm:ss) Alarm 0 : 0 : 0
Power On By Mouse [Disabled]
Power On By Keyboard [Disabled]
x KB Power ON Password Enter
AC Back Function [Soft-Off]
Item Help
Menu Level
↑↓→←: Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

☞ **ACPI Suspend Type**

- ⏩ S1(POS) Set ACPI suspend type to S1/POS(Power On Suspend). (Default value)
- ⏩ S3(STR) Set ACPI suspend type to S3/STR(Suspend To RAM).

☞ **Soft-off by PWR-BTTN**

- ⏩ Instant-off Press power button then Power off instantly. (Default value)
- ⏩ Delay 4 Sec. Press power button 4 sec. to Power off. Enter suspend if button is pressed less than 4 sec.

☞ **PME Event Wake Up**

- ⏩ Disabled Disable this function.
- ⏩ Enabled Enable PME Event Wake up. (Default value)

☞ **Power On by Ring**

- ⏩ Disabled Disable Power on by Ring function.
- ⏩ Enabled Enable Power on by Ring function. (Default value)

☞ **Resume by Alarm**

You can set "Resume by Alarm" item to enabled and key in Date/time to power on system.

- ⏩ Disabled Disable this function. (Default value)
- ⏩ Enabled Enable alarm function to POWER ON system.

If Resume by Alarm is Enabled.

- ⏩ Date (of Month) Alarm : Everyday, 1~31
- ⏩ Time (hh: mm: ss) Alarm : (0~23) : (0~59) : (0~59)

☞ **Power On By Mouse**

- ⏩ Disabled Disabled this function. (Default value)
- ⏩ Double Click Double click on PS/2 mouse left button to power on the system.

☞ **Power On By Keyboard**

- ⏩ Password Enter from 1 to 5 characters to set the Keyboard Power On Password.
- ⏩ Disabled Disabled this function. (Default value)
- ⏩ Keyboard 98 If your keyboard have "POWER Key" button, you can press the key to power on the system.

☞ **KB Power ON Password**

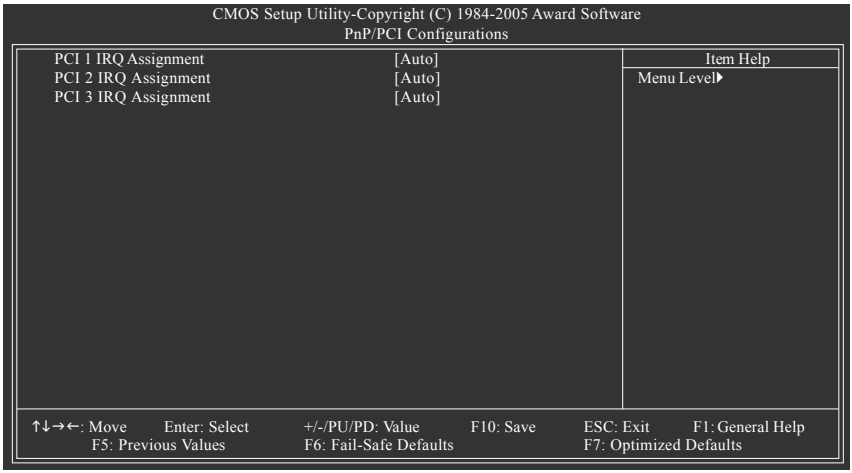
When "Power On by Keyboard" set at Password, you can set the password here.

- ⏩ Enter Input password (from 1 to 5 characters) and press Enter to set the Keyboard Power On password.

☞ **AC Back Function**

- ⏩ Soft-Off When AC-power back to the system, the system will be in "Off" state. (Default value)
- ⏩ Full-On When AC-power back to the system, the system always in "On" state.
- ⏩ Memory When AC-power back to the system, the system will return to the Last state before AC-power off.

2-5 PnP/PCI Configurations


CMOS Setup Utility-Copyright (C) 1984-2005 Award Software
PnP/PCI Configurations
PCI 1 IRQ Assignment [Auto]
PCI 2 IRQ Assignment [Auto]
PCI 3 IRQ Assignment [Auto]
Item Help
Menu Level
↑↓→←: Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

☞ **PCI 1 IRQ Assignment**

- Auto — Auto assign IRQ to PCI 1. (Default value)
- 3,4,5,7,9,10,11,12,14,15 — Set IRQ 3,4,5,7,9,10,11,12,14,15 to PCI 1.

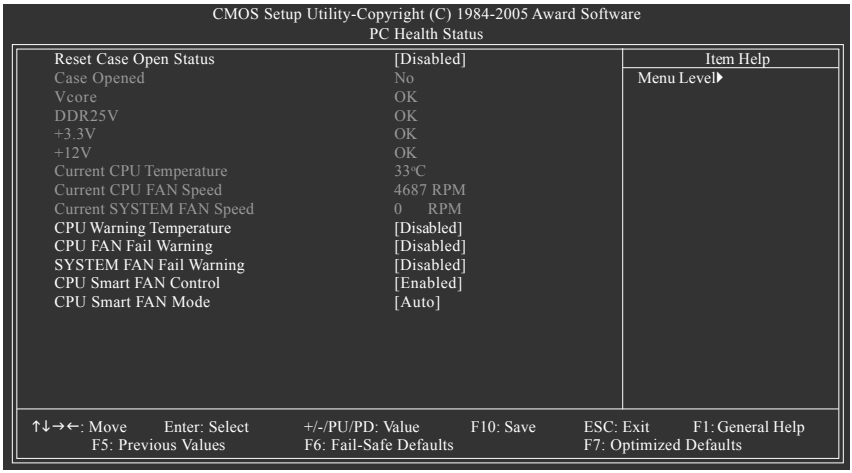
☞ **PCI 2 IRQ Assignment**

- Auto — Auto assign IRQ to PCI 2. (Default value)
- 3,4,5,7,9,10,11,12,14,15 — Set IRQ 3,4,5,7,9,10,11,12,14,15 to PCI 2.

☞ **PCI 3 IRQ Assignment**

- Auto — Auto assign IRQ to PCI 3. (Default value)
- 3,4,5,7,9,10,11,12,14,15 — Set IRQ 3,4,5,7,9,10,11,12,14,15 to PCI 3.

2-6 PC Health Status


CMOS Setup Utility-Copyright (C) 1984-2005 Award Software
PC Health Status
Reset Case Open Status [Disabled]
Case Opened No
Vcore OK
DDR25V OK
+3.3V OK
+12V OK
Current CPU Temperature 33°C
Current CPU FAN Speed 4687 RPM
Current SYSTEM FAN Speed 0 RPM
CPU Warning Temperature [Disabled]
CPU FAN Fail Warning [Disabled]
SYSTEM FAN Fail Warning [Disabled]
CPU Smart FAN Control [Enabled]
CPU Smart FAN Mode [Auto]
Item Help
Menu Level
↑↓→←: Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

☞ **Reset Case Open Status**

- ⏩ Disabled — Don't reset case open status. (Default value)
- ⏩ Enabled — Clear case open status at next boot.

☞ **Case Opened**

If the case is closed, "Case Opened" will show "No".

If the case have been opened, "Case Opened" will show "Yes".

If you want to reset "Case Opened" value, set "Reset Case Open Status" to "Enabled" and save CMOS, your computer will restart.

☞ **Current Voltage(V) Vcore / DDR25V / +3.3V / +12V**

- ⏩ Detect system's voltage status automatically.

☞ **Current CPU Temperature**

- ⏩ Detect CPU temperature automatically.

☞ **Current CPU/SYSTEM FAN Speed (RPM)**

- ⏩ Detect CPU/SYSTEM Fan speed status automatically.

☞ **CPU Warning Temperature**

- ⏩ 60°C / 140°F — Monitor CPU temperature at 60°C / 140°F.
- ⏩ 70°C / 158°F — Monitor CPU temperature at 70°C / 158°F.
- ⏩ 80°C / 176°F — Monitor CPU temperature at 80°C / 176°F.
- ⏩ 90°C / 194°F — Monitor CPU temperature at 90°C / 194°F.
- ⏩ Disabled — Disable this function. (Default value)

☞ **CPU/SYSTEM FAN Fail Warning**

- ⏩ Disabled — Fan warning function disable. (Default value)
- ⏩ Enabled — Fan warning function enable.

☞ **CPU Smart FAN Control**

- Disabled — Disable this function.
- Enabled — When this function is enabled, CPU fan will run at different speed depending on CPU temperature. Users can adjust the fan speed with Easy Tune based on their requirements. (Default Value)

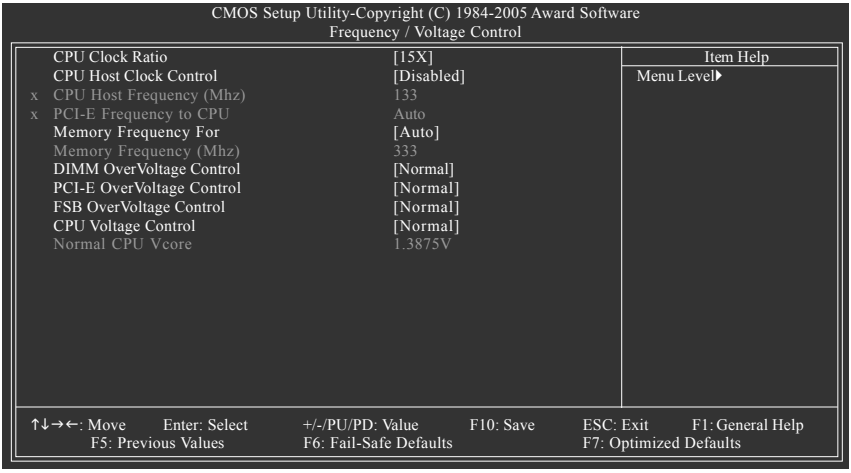
☞ **CPU Smart FAN Mode**

This option is available only when CPU Smart FAN Control is enabled.

- Auto — BIOS autodetects the type of CPU fan you installed and sets the optimal CPU Smart FAN control mode for it. (Default Value)
- Voltage — Set to Voltage when you use a CPU fan with a 3-pin fan power cable.
- PWM — Set to PWM when you use a CPU fan with a 4-pin fan power cable.

Note: In fact, the Voltage option can be used for CPU fans with 3-pin or 4-pin power cables. However, some 4-pin CPU fan power cables are not designed following Intel 4-Wire fans PWM control specifications. With such CPU fans, selecting PWM will not effectively reduce the fan speed.

2-7 Frequency / Voltage Control


CMOS Setup Utility-Copyright (C) 1984-2005 Award Software
Frequency / Voltage Control
CPU Clock Ratio [15X]
CPU Host Clock Control [Disabled]
x CPU Host Frequency (Mhz) 133
x PCI-E Frequency to CPU Auto
Memory Frequency For [Auto]
Memory Frequency (Mhz) 333
DIMM OverVoltage Control [Normal]
PCI-E OverVoltage Control [Normal]
FSB OverVoltage Control [Normal]
CPU Voltage Control [Normal]
Normal CPU Vcore 1.3875V
Item Help
Menu Level
↑↓→←: Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

CAUTION

Incorrect using these features may cause your system broken. For power end-user use only.

☞ **CPU Clock Ratio**

This setup option will automatically assign by CPU detection.

The option will display "Locked" and read only if the CPU ratio is not changeable.

☞ **CPU Host Clock Control**

Please note that if your system is overclocked and cannot restart, please wait 20secs. for automatic system restart or clear the CMOS setup data and perform a safe restart.

- ⏩ Disabled Disable CPU Host Clock Control. (Default value)
- ⏩ Enabled Enable CPU Host Clock Control.

☞ **CPU Host Frequency (Mhz)**

- ⏩ 100MHz ~ 600MHz Set CPU Host Frequency from 100MHz to 600MHz.

If you use FSB533 Pentium 4 processor, please set "CPU Host Frequency" to 133MHz.If you use FSB800 Pentium 4 processor, please set "CPU Host Frequency" to 200MHz.

Incorrect using it may cause your system broken. For power End-User use only!

☞ **PCI-E Frequency to CPU**

- ⏩ Auto Set PCI Express frequency to synchronize/asychronize with CPU according to different condition. (Default value)
- ⏩ ASYC Fix PCI Express frequency to 100MHz.

☞ **Memory Frequency For**

Wrong frequency may make system can't boot, clear CMOS to overcome wrong frequency issue.

for FSB(Front Side Bus) frequency=533MHz,

- ⏩ 2.5 Memory Frequency = Host clock X 2.5
- ⏩ 3 Memory Frequency = Host clock X 3.
- ⏩ 4 Memory Frequency = Host clock X 4.
- ⏩ Auto Set Memory frequency by DRAM SPD data. (Default value)

for FSB(Front Side Bus) frequency=800MHz,

- ⏩ 1.66 Memory Frequency = Host clock X 1.66.
- ⏩ 2.0 Memory Frequency = Host clock X 2.0.
- ⏩ 2.66 Memory Frequency = Host clock X 2.66.
- ⏩ Auto Set Memory frequency by DRAM SPD data. (Default value)

☞ **Memory Frequency (Mhz)**

The values depend on "Memory Frequency For" item.

☞ **DIMM OverVoltage Control**

Please note that by overclocking your system through the increase of the DIMM voltage, damage to the memory may occur.

- ⏩ Normal Set DIMM OverVoltage Control to Normal. (Default value)
- ⏩ +0.1V Set DIMM OverVoltage Control to +0.1V.
- ⏩ +0.2V Set DIMM OverVoltage Control to +0.2V.
- ⏩ +0.3V Set DIMM OverVoltage Control to +0.3V.

Incorrect using it may cause your system broken. For power End-User use only!

☞ **PCI-E OverVoltage Control**

- ⏩ Normal Set PCI-E OverVoltrage Control to Normal. (Default value)
- ⏩ +0.1V Set PCI-E OverVoltrage Control to +0.1V.
- ⏩ +0.2V Set PCI-E OverVoltrage Control to +0.2V.
- ⏩ +0.3V Set PCI-E OverVoltrage Control to +0.3V.

Incorrect using it may cause your system broken. For power End-User use only!

☞ **FSB OverVoltage Control**

- ⏩ Normal Set FSB OverVoltage Control to Normal. (Default value)
- ⏩ +0.1V Set FSB OverVoltage Control to +0.1V.
- ⏩ +0.2V Set FSB OverVoltage Control to +0.2V.
- ⏩ +0.3V Set FSB OverVoltage Control to +0.3V.

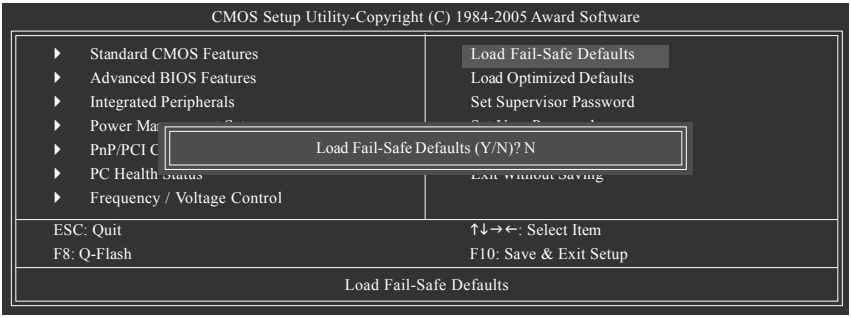
☞ **CPU Voltage Control**

⏩ Supports adjustable CPU Vcore from 0.8375V to 1.6000V. (Default value: Normal)

☞ **Normal CPU Vcore**

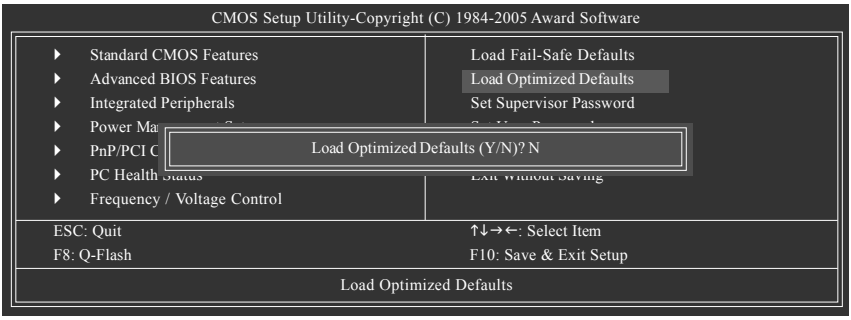
Display your CPU Vcore Voltage.

2-8 Load Fail-Safe Defaults



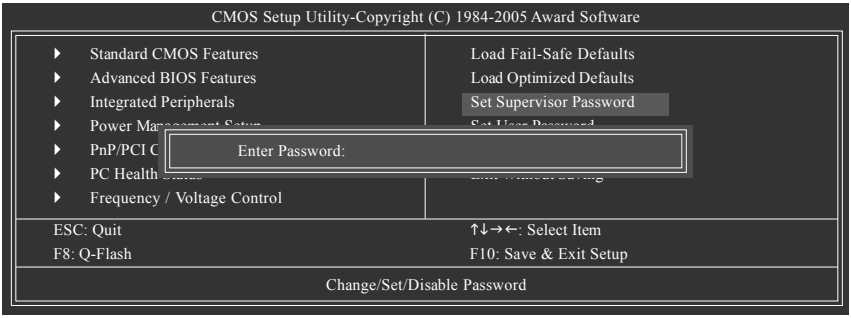
Fail-Safe defaults contain the most appropriate values of the system parameters that allow minimum system performance.

2-9 Load Optimized Defaults



Selecting this field loads the factory defaults for BIOS and Chipset Features which the system automatically detects.

2-10 Set Supervisor/User Password



When you select this function, the following message will appear at the center of the screen to assist you in creating a password.

Type the password, up to eight characters, and press <Enter>. You will be asked to confirm the password. Type the password again and press <Enter>. You may also press <Esc> to abort the selection and not enter a password.

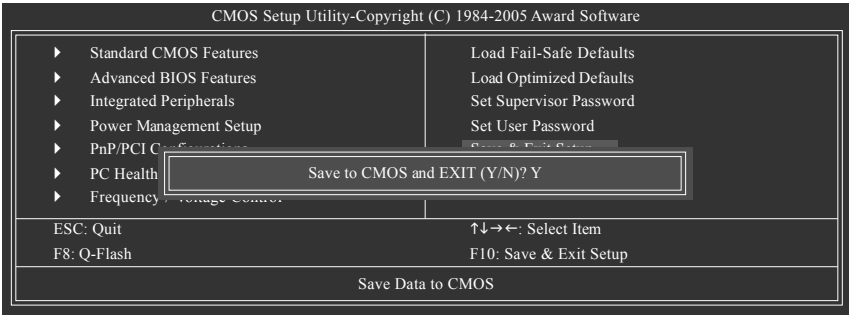
To disable password, just press <Enter> when you are prompted to enter password. A message "PASSWORD DISABLED" will appear to confirm the password being disabled. Once the password is disabled, the system will boot and you can enter Setup freely.

The BIOS Setup program allows you to specify two separate passwords:
SUPERVISOR PASSWORD and a USER PASSWORD. When disabled, anyone may access all BIOS Setup program function. When enabled, the Supervisor password is required for entering the BIOS Setup program and having full configuration fields, the User password is required to access only basic items.

If you select "System" at "Password Check" in Advance BIOS Features Menu, you will be prompted for the password every time the system is rebooted or any time you try to enter Setup Menu.

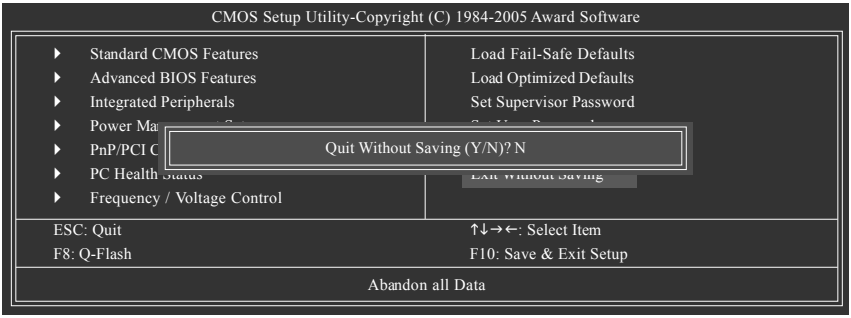
If you select "Setup" at "Password Check" in Advance BIOS Features Menu, you will be prompted only when you try to enter Setup.

2-11 Save & Exit Setup



Type "Y" will quit the Setup Utility and save the user setup value to RTC CMOS.
Type "N" will return to Setup Utility.

2-12 Exit Without Saving



Type "Y" will quit the Setup Utility without saving to RTC CMOS.
Type "N" will return to Setup Utility.

Chapter 3 Install Drivers

NOTE

Pictures below are shown in Windows XP.
Insert the driver CD-title that came with your motherboard into your CD-ROM drive, the driver CD-title will auto start and show the installation guide. If not, please double click the CD-ROM device icon in "My computer", and execute the Run.exe.

3-1 Install Chipset Drivers

"Xpress Install " is now analyizing your computer...99%

After insert the driver CD, "Xpress Install" will scan automatically the system and then list all the drivers that recommended to install. Please pick the item that you want and press "install" followed the item; or you can press "Xpress Install" to install all items defaulted.

NOTE

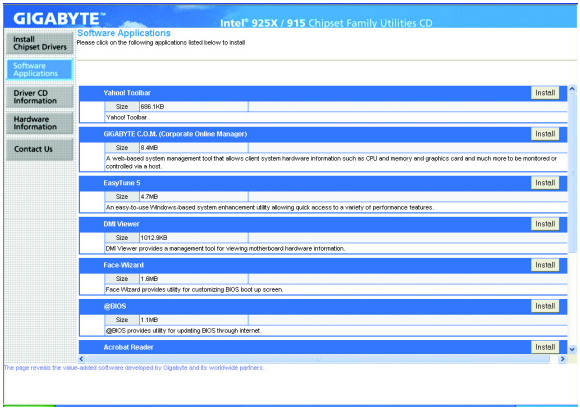
Some device drivers will restart your system automatically. After restarting your system the "Xpress Install" will continue to install other drivers. System will reboot automatically after install the drivers, afterward you can install others application.

CAUTION

For USB2.0 driver support under Windows XP operating system, please use Windows Service Pack. After install Windows Service Pack, it will show a question mark "?" in "Universal Serial Bus controller" under "Device Manager". Please remove the question mark and restart the system (System will auto-detect the right USB2.0 driver).

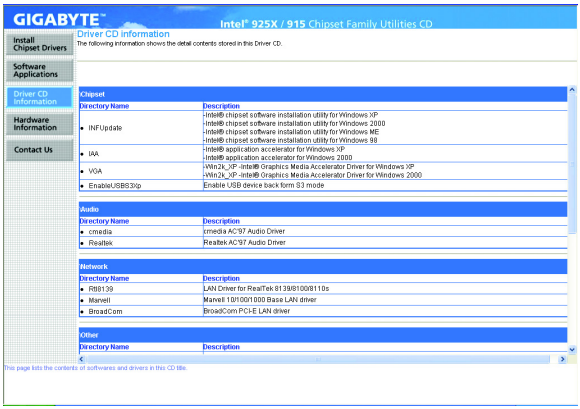
3-2 Software Applications

This page displays all the tools that Gigabyte developed and some free software, you can choose anyone you want and press "install" to install them.


GIGABYTE
Intel® 925X / 915 Chipset Family Utilities CD
Install Chipset Drivers
Software Applications
Driver CD Information
Hardware Information
Contact Us
Software Applications
Please click on the following applications listed below to install
Yahoo! Toolbar
Install
Size 686.1KB
Yahoo! Toolbar
GIGABYTE C.O.M. (Corporate Online Manager)
Install
Size 8.4MB
A web-based system management tool that allows client system hardware information such as CPU and memory and graphics card and much more to be monitored or controlled via a host.
EasyTune 5
Install
Size 4.7MB
An easy-to-use Windows-based system enhancement utility allowing quick access to a variety of performance features.
DMI Viewer
Install
Size 1012.9KB
DMI Viewer provides a management tool for viewing motherboard hardware information.
Face-Wizard
Install
Size 1.6MB
Face-Wizard provides utility for customizing BIOS boot up screen.
@BIOS
Install
Size 1.1MB
@BIOS provides utility for updating BIOS through internet.
Acrobat Reader
Install
The page reveals the value-added software developed by Gigabyte and its worldwide partners.

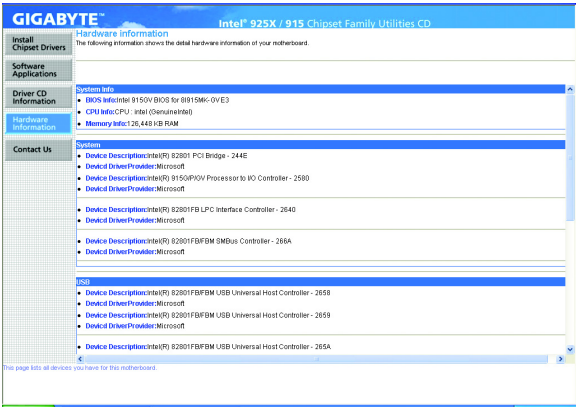
3-3 Driver CD Information

This page lists the contents of software and drivers in this CD-title.



3-4 Hardware Information

This page lists all device you have for this motherboard.


GIGABYTE
Intel® 925X / 915 Chipset Family Utilities CD
Install Chipset Drivers
Software Applications
Driver CD Information
Hardware Information
Contact Us
Hardware Information
The following information shows the detail hardware information of your motherboard.
System Info
BIOS Info:Intel 9150V BIOS for 8I915MK-0VE3
CPU Info:CPU : Intel (GenuineIntel)
Memory Info:126,448 KB RAM
System
Device Description:Intel(R) 82801 PCI Bridge - 244E
DevId DriverProvider:Microsoft
Device Description:Intel(R) 9150/P9OV Processor to I/O Controller - 2580
DevId DriverProvider:Microsoft
Device Description:Intel(R) 82801FB LPC Interface Controller - 2640
DevId DriverProvider:Microsoft
Device Description:Intel(R) 82801FB/FBM SMBus Controller - 266A
DevId DriverProvider:Microsoft
USB
Device Description:Intel(R) 82801FB/FBM USB Universal Host Controller - 2658
DevId DriverProvider:Microsoft
Device Description:Intel(R) 82801FB/FBM USB Universal Host Controller - 2659
DevId DriverProvider:Microsoft
Device Description:Intel(R) 82801FB/FBM USB Universal Host Controller - 265A
This page lists all devices you have for this motherboard.

3-5 Contact Us

Please see the last page for details.

Chapter 4 Appendix

4-1 Unique Software Utilities

(Not all model support these Unique Software Utilities, please check your MB features.)

U-PLUS D.P.S. (Universal Plus Dual Power System)

The U-Plus Dual Power System (U-Plus DPS) is a revolutionary eight-phase power circuit built for ultimate system protection. Designed to withstand varying current levels and changes, the U-Plus D.P.S. provides an immensely durable and stable power circuit to the CPU for solid system stability. These characteristics make it the ideal companion with the latest LGA775 Intel® Pentium® 4 Processor as well as future Intel® processors. As well, 4 blue LED's are mounted on the U-Plus D.P.S. for intelligent indication of system loading.

M.I.T. (Motherboard Intelligent Tweaker)

Motherboard Intelligent Tweaker (M.I.T.) allows user to access and change BIOS feature settings with relative speed and ease. Through GIGABYTE M.I.T. feature the user is no longer required to switch into different modes within BIOS setup in order to change system settings such as the CPU system bus, memory timings or to enabled Gigabyte's unique C.I.A. 2 and M.I.B. 2 features. M.I.T.'s integration of all platform performance settings into a single mode now gives any user the ability to control and enhance their computer system to the desired level.

C.I.A.2 (CPU Intelligent Accelerator 2)

GIGABYTE CPU Intelligent Accelerator 2(C.I.A. 2) is designed to automatically adjust CPU computing power to maximize system performance. When enabled, the program detects the current CPU loading and automatically accelerates the CPU computing performance to allow for a faster and smoother execution of programs. When the function is disabled, the CPU is returned to its initial status.

M.I.B.2 (Memory Intelligent Booster 2)

Built on the original M.I.B., the new Memory Intelligent Booster 2 (M.I.B. 2) is designed especially to maximize memory performance and boost memory bandwidth up to 10%. With added branded memory module information, users are able to optimize memory performance by selecting from a recommended memory module list.

S.O.S. (System Overclock Saver)

System Overclock Saver (S.O.S.) is a unique feature that eliminates system boot-up errors resulting from system over-enhancement by the user. With GIGABYTE's proprietary S.O.S. feature, users no longer need to open up the PC chassis and short-circuit the "Clear CMOS" pins or the battery on the motherboard to reset the system back to factory default settings. Instead, S.O.S. automatically resets the overclocked system settings back to their factory defaults to provide a more user-friendly and reliable platform for users.

Download Center

Download Center allows users to quickly download and update their BIOS as well as the latest drivers for their system. Download Center automatically runs a system check of the user PC and provides the user with the current system information as well as displaying a detailed list of all new drivers with the option for download.

C.O.M. (Corporate Online Management)

A web-based system management tool that allows system hardware information such as CPU, memory, graphics card, etc. to be monitored and controlled via the Internet, C.O.M. allows corporate MIS engineers to easily maintain corporate computers such as providing the most up-to-date drivers and BIOS. (Do not use C.O.M. and @BIOS at the same time.)

4-1-1 EasyTune 5 Introduction

EasyTune 5 presents the most convenient Windows based system performance enhancement and manageability utility. Featuring several powerful yet easy to use tools such as 1) Overclocking for enhancing system performance, 2) C.I.A. and M.I.B. for special enhancement for CPU and Memory, 3) Smart-Fan control for managing fan speed control of both CPU cooling fan and North-Bridge Chipset cooling fan, 4) PC health for monitoring system status.(Note)

User Interface Overview

	Button / Display	Description
1.	Overclocking	Enters the Overclocking setting page
2.	C.I.A./C.I.A.2 and M.I.B./M.I.B.2	Enters the C.I.A./2 and M.I.B./2 setting page
3.	Smart-Fan	Enters the Smart-Fan setting page
4.	PC Health	Enters the PC Health setting page
5.	GO	Confirmation and Execution button
6.	"Easy Mode" & "Advance Mode"	Toggles between Easy and Advance Mode
7.	Display screen	Display panel of CPU frequency
8.	Function display LEDs	Shows the current functions status
9.	GIGABYTE Logo	Log on to GIGABYTE website
10.	Help button	Display EasyTune™ 5 Help file
11.	Exit or Minimize button	Quit or Minimize EasyTune™ 5 software

(Note) EasyTune 5 functions may vary depending on different motherboards.

4-1-2 Xpress Recovery Introduction

What is Xpress Recovery ?

Xpress Recovery is a utility used to back up and restore an OS partition. If the hard drive is not working properly, the user can restore the drive to its original state.

CAUTION

1. Supports FAT16, FAT32, and NTFS formats
2. Must be connected to the IDE1 Master
3. Allows installation of only one OS
4. Must be used with an IDE hard disk supporting HPA
5. The first partition must be set as the boot partition. When the boot partition is backed up, please do not alter its size.
6. Xpress Recovery is recommended when using Ghost to return boot manager to NTFS format.

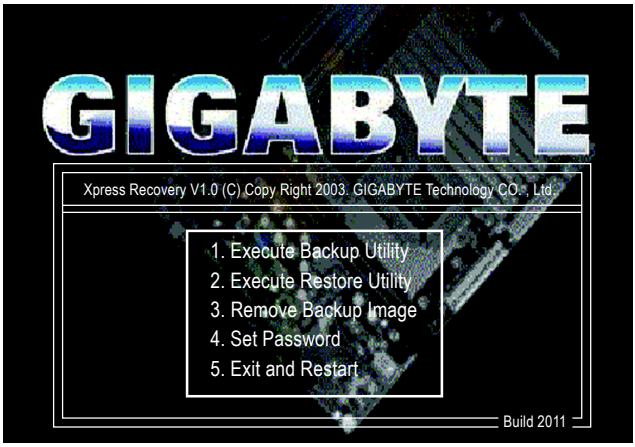
How to use the Xpress Recovery

1. Boot from CD-ROM (BMP Mode)

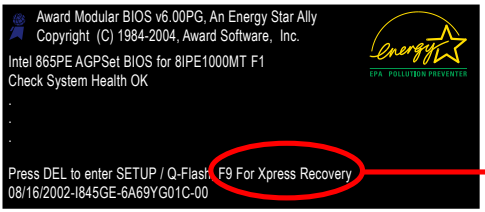
   Enter the BIOS menu, select "Advanced BIOS Feature" and set to boot from CD-ROM. Insert the provided driver CD into your CD drive, then save and exit the BIOS menu. Once the computer has restarted, the phrase "Boot from CD:" will appear at the bottom left-hand corner of the screen. When "Boot from CD:" appears, press any key to enter Xpress Recovery.

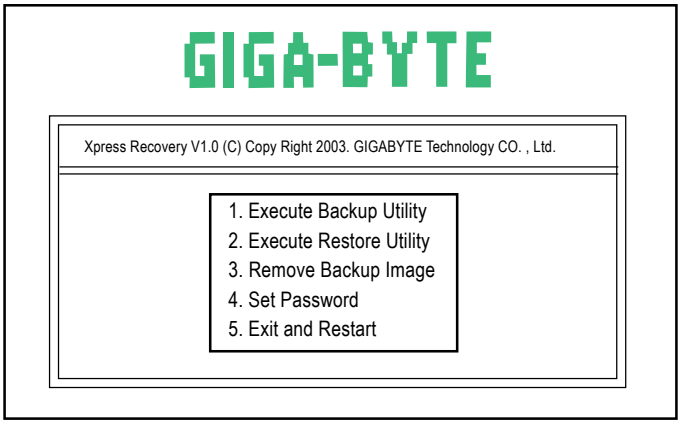
   Once you have completed this step, subsequent access to Xpress Recovery can also function by pressing the F9 key during computer power on.

Boot from CD:


GIGABYTE
Xpress Recovery V1.0 (C) Copy Right 2003. GIGABYTE Technology CO., Ltd.
1. Execute Backup Utility
2. Execute Restore Utility
3. Remove Backup Image
4. Set Password
5. Exit and Restart
Build 2011

2. Press F9 during powering on the computer. (Text Mode)


Award Modular BIOS v6.00PG, An Energy Star Ally
Copyright (C) 1984-2004, Award Software, Inc.
Intel 865PE AGPSet BIOS for 8IPE1000MT F1
Check System Health OK
Press DEL to enter SETUP / Q-Flash, F9 For Xpress Recovery
08/16/2002-I845GE-6A69YG01C-00
F9 For Xpress Recovery


GIGA-BYTE
Xpress Recovery V1.0 (C) Copy Right 2003. GIGABYTE Technology CO. , Ltd.
1. Execute Backup Utility
2. Execute Restore Utility
3. Remove Backup Image
4. Set Password
5. Exit and Restart

NOTE

1. If you have already entered Xpress Recovery by booting from the CD-ROM, you can enter Xpress Recovery in the future by pressing the F9 key.
2. System storage capacity as well as drive reading/writing speed will affect backup speed.
3. It is recommended that Xpress Recovery be immediately installed after OS and all required driver and software installations are complete.

1. Execute Backup Utility:

Press B to Backup your System or Esc to Exit

The backup utility will automatically scan your system and back up data as a backup image in your hard drive.

Not all systems support access to Xpress Recovery by pressing the F9 key during computer power on. If this is the case, please use the boot from CD-ROM method to enter Xpress Recovery.

2. Execute Restore Utility:

This program will recover your system to factory default.

Press R to restore your system back to factory default or press Esc to exit

Restores backup image to original state.

3. Remove Backup Image:

Remove backup image. Are you sure? (Y/N)

Remove the backup image.

4. Set Password:

Please input a 4-16 character long password (a-z or 0-9) or press Esc to exit

You can set a password to enter Xpress Recovery to protect your hard disk data. Once this is done, password input will be required to enter Xpress Recovery during the next as well as subsequent system restarts. If you wish to remove the need for password entry, please select "Set Password" and under "New Password/Confirm Password", make sure there is no entry and then press "Enter" to remove password requirement.

5. Exit and Restart:

Exit and restart your computer.

4-1-3 Flash BIOS Method Introduction

Method 1 : Q-Flash™ Utility

Q-Flash™ is a BIOS flash utility embedded in Flash ROM. With this utility, users only have to stay in the BIOS menu when they want to update BIOS. Q-Flash?allows users to flash BIOS without any utility in DOS or Windows. Using Q-Flash™ indicating no more fooling around with any complicated instructions and operating system since it is in the BIOS menu.

CAUTION

Please note that because updating BIOS has potential risk, please do it with caution!! We are sorry that Gigabyte Technology Co., Ltd is not responsible for damages of system because of incorrect manipulation of updating BIOS to avoid any claims from end-users.

Before You Begin:

Before you start updating BIOS with the Q-Flash™ utility, please follow the steps below first.

1. Download the latest BIOS for your motherboard from Gigabyte's website.
2. Extract the BIOS file downloaded and save the BIOS file (the one with model name.Fxx. For example, 8KNXPU.Fba) to a floppy disk.
3. Reboot your PC and press **Del** to enter BIOS menu.

The BIOS upgrading guides below are separated into two parts.
If your motherboard has dual-BIOS, please refer to **Part One**.
If your motherboard has single-BIOS, please refer to **Part Two**.

Part One:

Updating BIOS with Q-Flash™ Utility on Dual BIOS Motherboards.

Some of Gigabyte motherboards are equipped with dual BIOS. In the BIOS menu of the motherboards supporting Q-Flash and Dual BIOS, the Q-Flash utility and Dual BIOS utility are combined in the same screen. This section only deals with how to use Q-Flash utility.

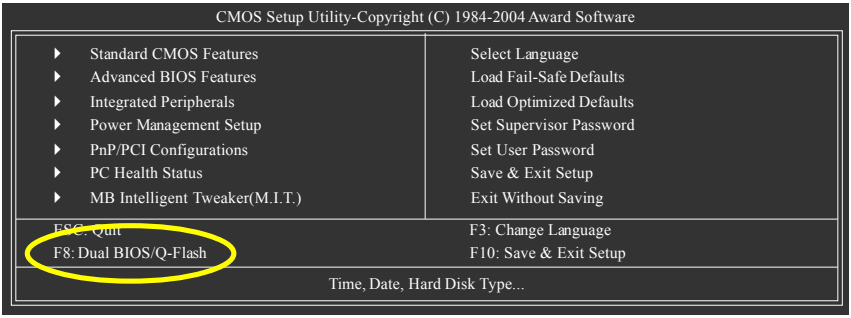
In the following sections, we take GA-8KNXP Ultra as the example to guide you how to flash BIOS from an older version to the latest version. For example, from Fa3 to Fba.

The BIOS file is Fa3 before updating

Award Modular BIOS v6.00PG, An Energy Star Ally
Copyright (C) 1984-2003, Award Software, Inc.
Dual BIOS
DPS Gold
Dual Power System
Intel i875P AGPset BIOS for 8KNXP Ultra Fa3
Check System Health OK , VCore = 1.5250
Main Processor : Intel Pentium(R) 4 1.6GHz (133x12)
<CPUID : 0F27 Patch ID : 0027>
Memory Testing : 131072K OK
Memory Frequency 266 MHz in Single Channel
Primary Master : FUJITSU MPE3170AT ED-03-08
Primary Slave : None
Secondary Master : CREATIVEDVD-RM DVD1242E BC101
Secondary Slave : None
Press DEL to enter SETUP / Dual BIOS / Q-Flash / F9 For Xpress Recovery
08/07/2003-i875P-6A79BG03C-00

Entering the Q-Flash™ utility:

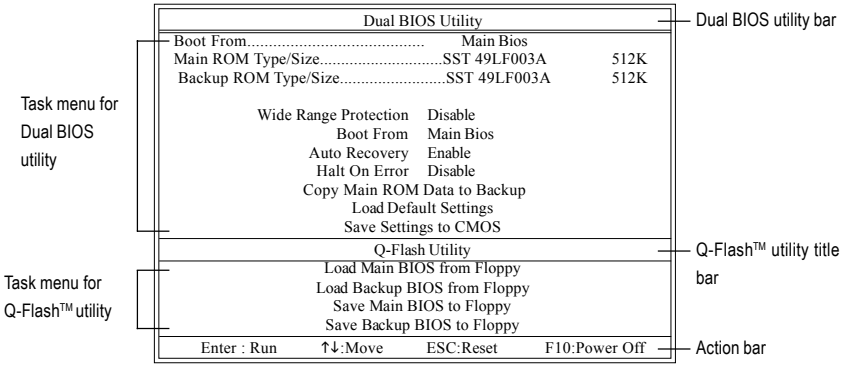
Step1: To use Q-Flash utility, you must press **Del** in the boot screen to enter BIOS menu.



Step 2: Press **F8** button on your keyboard and then **Y** button to enter the Dual BIOS/Q-Flash utility.

Exploring the Q-Flash™ / Dual BIOS utility screen

The Q-Flash / Dual BIOS utility screen consists of the following key components.



Task menu for Dual BIOS utility:

Contains the names of eight tasks and two item showing information about the BIOS ROM type. Blocking a task and pressing Enter key on your keyboard to enable execution of the task.

Task menu for Q-Flash utility:

Contains the names of four tasks. Blocking a task and pressing Enter key on your keyboard to enable execution of the task.

Action bar:

Contains the names of four actions needed to operate the Q-Flash/Dual BIOS utility. Pressing the buttons mentioned on your keyboards to perform these actions.

Using the Q-Flash™ utility:

This section tells you how to update BIOS using the Q-Flash utility. As described in the "Before you begin" section above, you must prepare a floppy disk having the BIOS file for your motherboard and insert it to your computer. If you have already put the floppy disk into your system and have entered the Q-Flash utility, please follow the steps below to flash BIOS.

Steps:

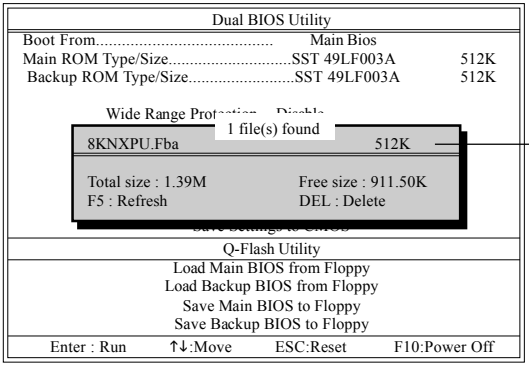
1. Press arrow buttons on your keyboard to move the light bar to "Load Main BIOS from Floppy" item in the Q-Flash menu and press Enter button.
   Later, you will see a box pop up showing the BIOS files you previously downloaded to the floppy disk.

NOTE If you want to save the current BIOS for backup purpose, you can begin Step 1 with "Save Main BIOS to Floppy" item.

2. Move to the BIOS file you want to flash and press **Enter**.

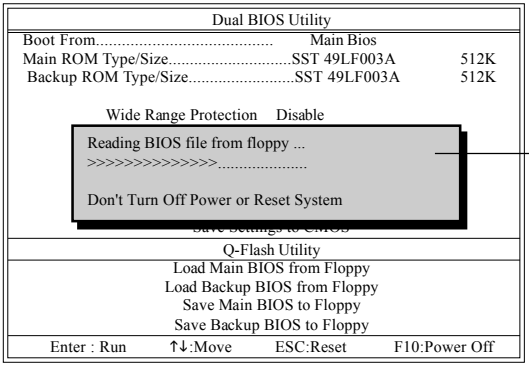
In this example, we only download one BIOS file to the floppy disk so only one BIOS file, 8KNXPU.Fba, is listed.

CAUTION Please confirm again you have the correct BIOS file for your motherboard.


Dual BIOS Utility
Boot From..... Main Bios
Main ROM Type/Size.....SST 49LF003A 512K
Backup ROM Type/Size.....SST 49LF003A 512K
Wide Range Prot... Disable
1 file(s) found
8KNXPU.Fba 512K
Total size : 1.39M Free size : 911.50K
F5 : Refresh DEL : Delete
Q-Flash Utility
Load Main BIOS from Floppy
Load Backup BIOS from Floppy
Save Main BIOS to Floppy
Save Backup BIOS to Floppy
Enter : Run ↑↓:Move ESC:Reset F10:Power Off

BIOS file in the floppy disk.

After pressing **Enter**, you'll then see the progress of reading the BIOS file from the floppy disk.


Dual BIOS Utility
Boot From..... Main Bios
Main ROM Type/Size.....SST 49LF003A 512K
Backup ROM Type/Size.....SST 49LF003A 512K
Wide Range Protection Disable
Reading BIOS file from floppy ...
>>>>>>>>>>>>>>>.....
Don't Turn Off Power or Reset System
Q-Flash Utility
Load Main BIOS from Floppy
Load Backup BIOS from Floppy
Save Main BIOS to Floppy
Save Backup BIOS to Floppy
Enter : Run ↑↓:Move ESC:Reset F10:Power Off

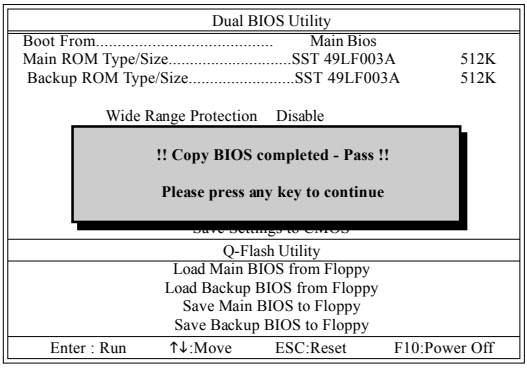
CAUTION Do not turn off power or reset your system at this stage!!

After BIOS file is read, you'll see a confirmation dialog box asking you "Are you sure to update BIOS?"

3. Press Y button on your keyboard after you are sure to update BIOS.
   Then it will begin to update BIOS. The progress of updating BIOS will be displayed.

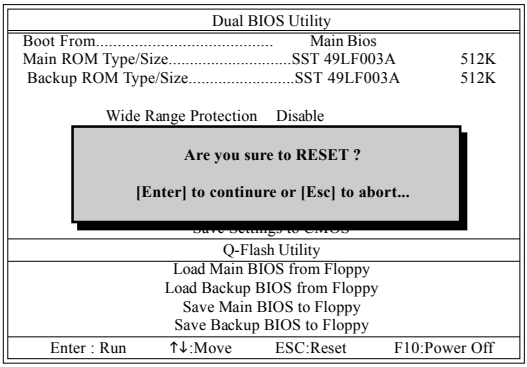
CAUTION Please do not take out the floppy disk when it begins flashing BIOS.

4. Press any keys to return to the Q-Flash menu when the BIOS updating procedure is completed.


Dual BIOS Utility
Boot From..... Main Bios
Main ROM Type/Size.....SST 49LF003A 512K
Backup ROM Type/Size.....SST 49LF003A 512K
Wide Range Protection Disable
!! Copy BIOS completed - Pass !!
Please press any key to continue
Q-Flash Utility
Load Main BIOS from Floppy
Load Backup BIOS from Floppy
Save Main BIOS to Floppy
Save Backup BIOS to Floppy
Enter : Run ↑↓:Move ESC:Reset F10:Power Off

NOTE You can repeat Step 1 to 4 to flash the backup BIOS, too.

5. Press Esc and then Y button to exit the Q-Flash utility. The computer will restart automatically after you exit Q-Flash.

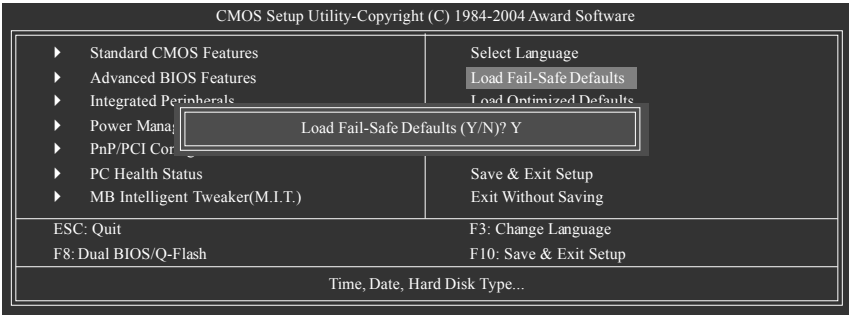

Dual BIOS Utility
Boot From..... Main Bios
Main ROM Type/Size.....SST 49LF003A 512K
Backup ROM Type/Size.....SST 49LF003A 512K
Wide Range Protection Disable
Are you sure to RESET ?
[Enter] to continure or [Esc] to abort...
Q-Flash Utility
Load Main BIOS from Floppy
Load Backup BIOS from Floppy
Save Main BIOS to Floppy
Save Backup BIOS to Floppy
Enter : Run ↑↓:Move ESC:Reset F10:Power Off

After system reboots, you may find the BIOS version on your boot screen becomes the one you flashed.

The BIOS file becomes Fab after updating.

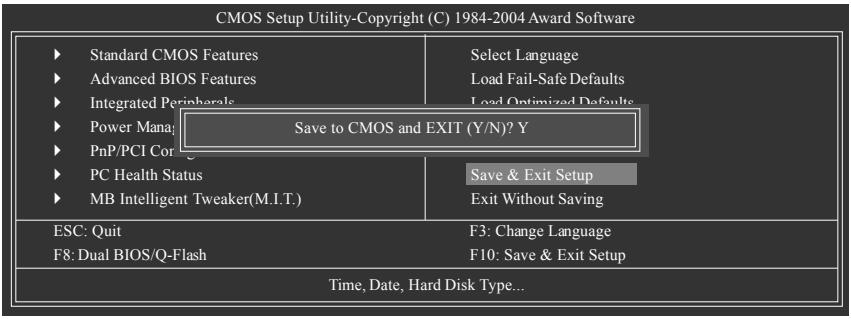
Award Modular BIOS v6.00PG, An Energy Star Ally
Copyright (C) 1984-2003, Award Software, Inc.
Dual BIOS
DPS2
Dual Power System
Intel i875P AGPset BIOS For 8KNXP Ultra Fba
Check System Health OK , VCore = 1.5250
Main Processor : Intel Pentium(R) 4 1.6GHz (133x12)
<CPUID : 0F27 Patch ID : 0027>
Memory Testing : 131072K OK
Memory Frequency 266 MHz in Single Channel
Primary Master : FUJITSU MPE3170AT ED-03-08
Primary Slave : None
Secondary Master : CREATIVEDVD-RM DVD1242E BC101
Secondary Slave : None
Press DEL to enter SETUP / Dual BIOS / Q-Flash / F9 For Xpress Recovery
09/23/2003-i875P-6A79BG03C-00

6. Press **Del** to enter BIOS menu after system reboots. When you are in BIOS menu, move to **Load Fail-Safe Defaults** item and press **Enter** to load BIOS Fail-Safe Defaults. Normally the system redetects all devices after BIOS has been upgraded. Therefore, we highly recommend reloading the BIOS defaults after BIOS has been upgraded.



Press **Y** on your keyboard to load defaults.

7. Select **Save & Exit Setup** item to save the settings to CMOS and exit the BIOS menu. System will reboot after you exit the BIOS menu. The procedure is completed.

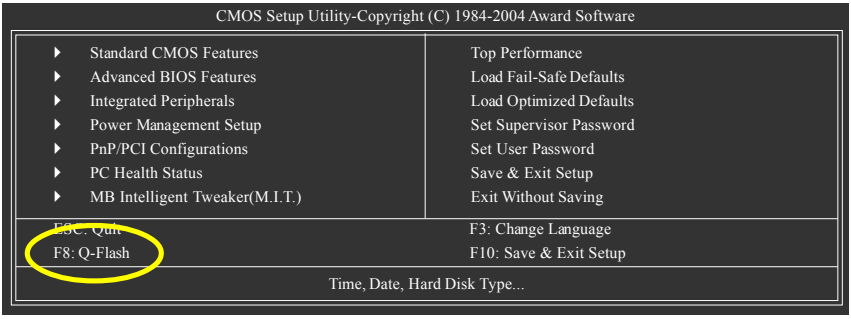


Press **Y** on your keyboard to save and exit.

Part Two:

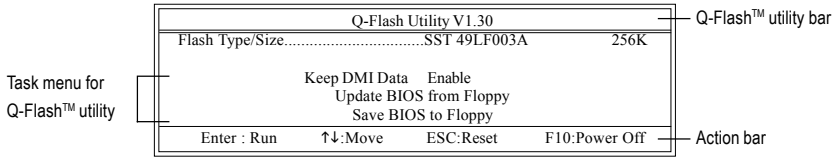
Updating BIOS with Q-Flash™ Utility on Single-BIOS Motherboards.

This part guides users of single-BIOS motherboards how to update BIOS using the Q-Flash™ utility.



Exploring the Q-Flash™ utility screen

The Q-FlashBIOS utility screen consists of the following key components.


Q-Flash Utility V1.30
Flash Type/Size.....SST 49LF003A 256K
Keep DMI Data Enable
Update BIOS from Floppy
Save BIOS to Floppy
Enter : Run ↑↓:Move ESC:Reset F10:Power Off
Q-Flash™ utility bar
Task menu for Q-Flash™ utility
Action bar

Task menu for Q-Flash utility:

Contains the names of three tasks. Blocking a task and pressing Enter key on your keyboard to enable execution of the task.

Action bar:

Contains the names of four actions needed to operate the Q-Flash utility. Pressing the buttons mentioned on your keyboards to perform these actions.

Using the Q-Flash™ utility:

This section tells you how to update BIOS using the Q-Flash utility. As described in the "Before you begin" section above, you must prepare a floppy disk having the BIOS file for your motherboard and insert it to your computer. If you have already put the floppy disk into your system and have entered the Q-Flash utility, please follow the steps below to flash BIOS.

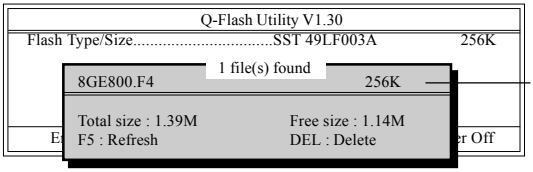
Steps:

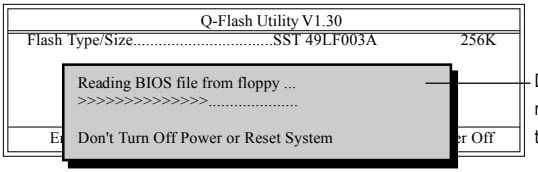
1. Press arrow buttons on your keyboard to move the light bar to "Update BIOS from Floppy" item in the Q-Flash menu and press Enter button.
   Later, you will see a box pop up showing the BIOS files you previously downloaded to the floppy disk.

NOTE If you want to save the current BIOS for backup purpose, you can begin Step 1 with "Save BIOS to Floppy" item.

2. Move to the BIOS file you want to flash and press Enter.
   In this example, we only download one BIOS file to the floppy disk so only one BIOS file, 8GE800.F4, is listed.

CAUTION Please confirm again you have the correct BIOS file for your motherboard.

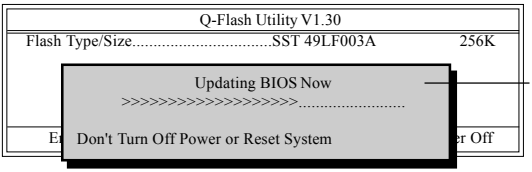

Q-Flash Utility V1.30
Flash Type/Size.....SST 49LF003A 256K
1 file(s) found
8GE800.F4 256K
Total size : 1.39M Free size : 1.14M
F5 : Refresh DEL : Delete
BIOS file in the floppy disk.


Q-Flash Utility V1.30
Flash Type/Size.....SST 49LF003A 256K
Reading BIOS file from floppy ...
>>>>>>>>>>>>>>>.....
Don't Turn Off Power or Reset System
CAUTION
Do not turn off power or reset your system at this stage!!

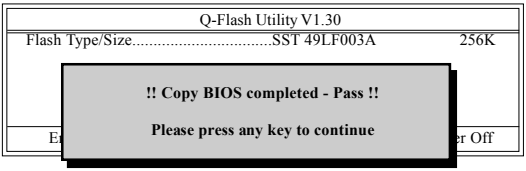
After BIOS file is read, you'll see a confirmation dialog box asking you "Are you sure to update BIOS?"

CAUTION Please do not take out the floppy disk when it begins flashing BIOS.

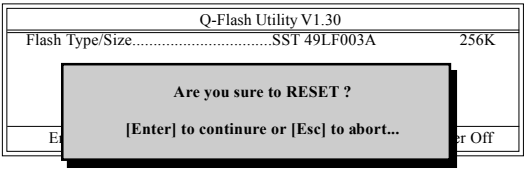
3. Press Y button on your keyboard after you are sure to update BIOS.
   Then it will begin to update BIOS. The progress of updating BIOS will be shown at the same time.


Q-Flash Utility V1.30
Flash Type/Size.....SST 49LF003A 256K
Updating BIOS Now
>>>>>>>>>>>>>>>>>>>>.....
Don't Turn Off Power or Reset System
CAUTION
Do not turn off power or reset your system at this stage!!

4. Press any keys to return to the Q-Flash menu when the BIOS updating procedure is completed.

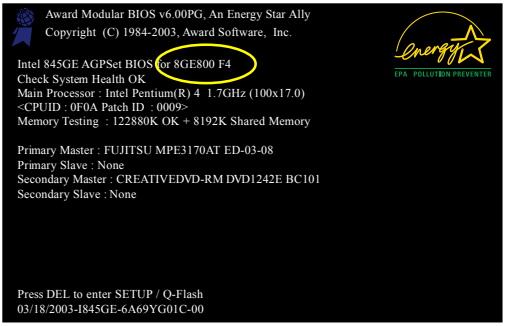


5. Press Esc and then Y button to exit the Q-Flash utility. The computer will restart automatically after you exit Q-Flash.



After system reboots, you may find the BIOS version on your boot screen becomes the one you flashed.

The BIOS file becomes F4 after updating


Award Modular BIOS v6.00PG, An Energy Star Ally
Copyright (C) 1984-2003, Award Software, Inc.
Intel 845GE AGPSet BIOS for 8GE800 F4
Check System Health OK
Main Processor : Intel Pentium(R) 4 1.7GHz (100x17.0)
<CPUID : 0F0A Patch ID : 0009>
Memory Testing : 122880K OK + 8192K Shared Memory
Primary Master : FUJITSU MPE3170AT ED-03-08
Primary Slave : None
Secondary Master : CREATIVEDVD-RM DVD1242E BC101
Secondary Slave : None
Press DEL to enter SETUP / Q-Flash
03/18/2003-I845GE-6A69YG01C-00

6. Press Del to enter BIOS menu after system reboots and "Load BIOS Fail-Safe Defaults". See how to Load BIOS Fail-Safe Defaults, please kindly refer to Step 6 to 7 in **Part One**.

Congratulation!! You have updated BIOS successfully!!

Method 2 : @BIOS™ Utility

If you do not have a DOS startup disk, we recommend that you use the new @BIOS utility. @BIOS allows users to update their BIOS under Windows. Just select the desired @BIOS server to download the latest version of BIOS.

Fig 1. Installing the @BIOS utility

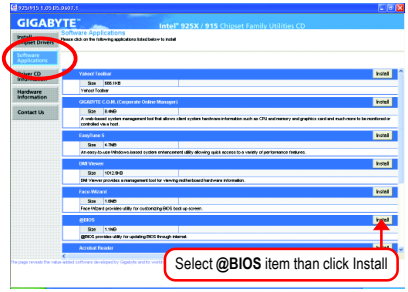


Fig 2. Installation Complete and Run @BIOS

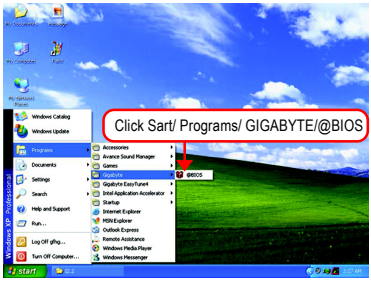


Fig 3. The @BIOS Utility

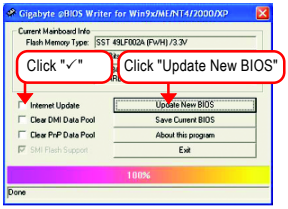
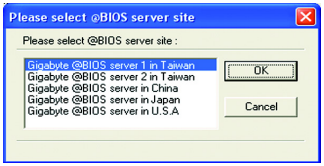


Fig 4. Select the desired @BIOS server


Please select @BIOS server site
Please select @BIOS server site :
Gigabyte @BIOS server 1 in Taiwan
Gigabyte @BIOS server 2 in Taiwan
Gigabyte @BIOS server in China
Gigabyte @BIOS server in Japan
Gigabyte @BIOS server in U.S.A
OK
Cancel

1. Methods and steps:

I. Update BIOS through Internet

a. Click "Internet Update" icon
b. Click "Update New BIOS" icon
c. Select @BIOSTM sever
d. Select the exact model name on your motherboard
e. System will automatically download and update the BIOS.

II. Update BIOS NOT through Internet:

a. Do not click "Internet Update" icon
b. Click "Update New BIOS"
c. Please select "All Files" in dialog box while opening the old file.
d. Please search for BIOS unzip file, downloading from internet or any other methods (such as: 8I915MK-GV.F1).
e. Complete update process following the instruction.

III. Save BIOS
In the very beginning, there is "Save Current BIOS" icon shown in dialog box. It means to save the current BIOS version.

IV. Check out supported motherboard and Flash ROM:
In the very beginning, there is "About this program" icon shown in dialog box. It can help you check out which kind of motherboard and which brand of Flash ROM are supported.

2. Note:

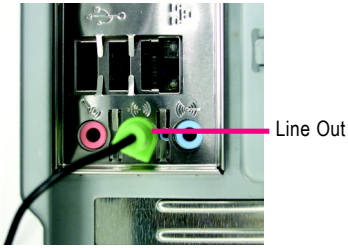
I. In method I, if it shows two or more motherboard's model names to be selected, please make sure your motherboard's model name again. Selecting wrong model name will cause the system unbooted.
II. In method II, be sure that motherboard's model name in BIOS unzip file are the same as your motherboard's. Otherwise, your system won't boot.
III. In method I, if the BIOS file you need cannot be found in @BIOS™ server, please go onto Gigabyte's web site for downloading and updating it according to method II.
IV. Please note that any interruption during updating will cause system unbooted.
V. Do not use @BIOS and C.O.M. (Corporate Online Management) at the same time.

4-1-5 2 / 4 / 6 Channel Audio Function Introduction

2 Channel Audio Setup

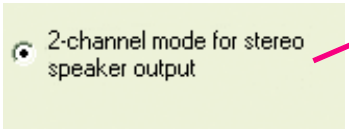
We recommend that you use speakers with amplifier to get the best sound effect if the stereo output is applied.

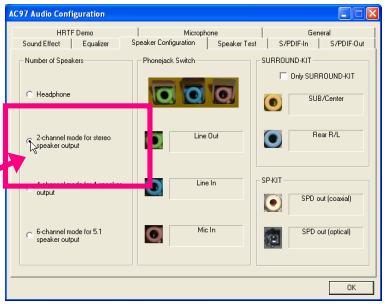
STEP 1:
Connect the stereo speakers or earphone to "Line Out."



STEP 2:
After installing the audio driver, you'll find a Sound Effect icon on the lower right hand taskbar. Click the icon to select the function.

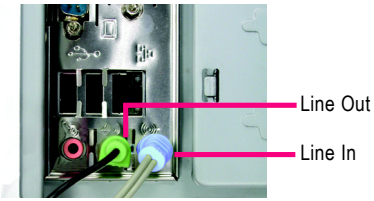
STEP 3:
On the AC97 Audio Configuration menu, click the **Speaker Configuration** tab and select the **2-channel mode for stereo speaker output** check box.



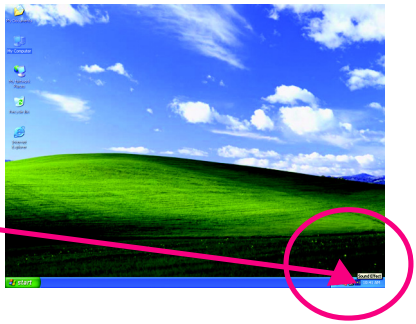


4 Channel Analog Audio Output Mode

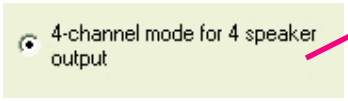
STEP 1:
Connect the front channels to "Line Out," the rear channels to "Line In."

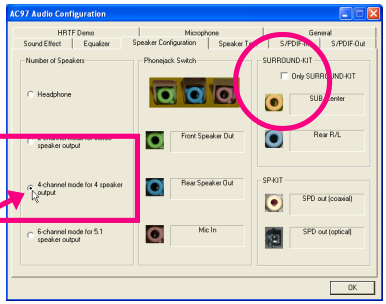


STEP 2:
After installing the audio driver, you'll find a Sound Effect icon on the lower right hand taskbar. Click the icon to select the function.

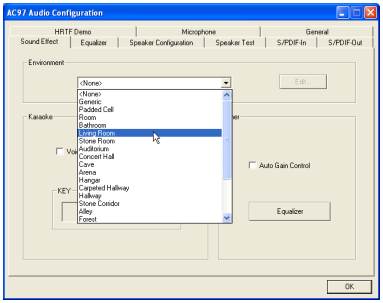


STEP 3:
On the AC97 Audio Configuration menu, click the **Speaker Configuration** tab and select the **4-channel mode for 4 speaker output** check box. Clear the **Only SURROUND-KIT** check box and press **OK.**





When the **Environment** setting is **None**, the sound would be performed as stereo mode (2-channel output). Please select other settings (ex: **Living Room**) for 4-channel output.

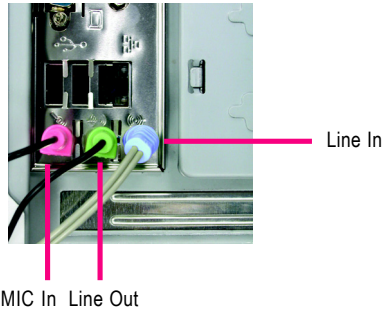


Basic 6 Channel Analog Audio Output Mode

Use the back audio panel to connect the audio output without any additional module.

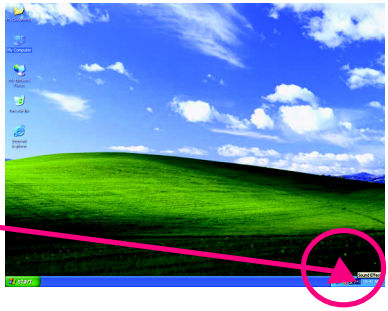
STEP 1:

Connect the front channels to "Line Out",the rear channels to "Line In", and the Center/Subwoofer channels to "MIC In".



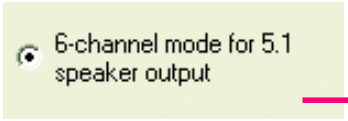
STEP 2:

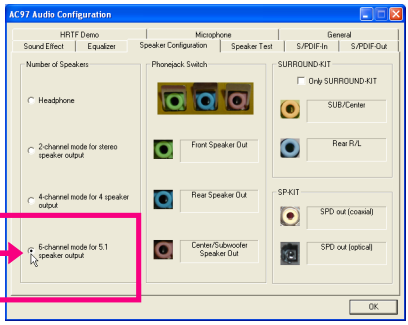
After installing the audio driver, you'll find a Sound Effect icon on the lower right hand taskbar. Click the icon to select the function.



STEP 3:

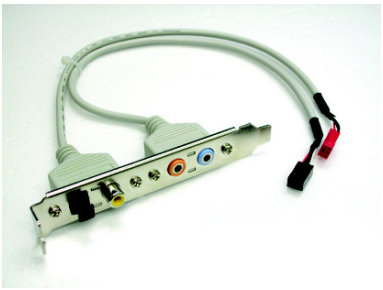
On the AC97 Audio Configuration menu, click the **Speaker Configuration** tab and select the **6-channel mode for 5.1 speaker output** check box. Clear the **Only SURROUND-KIT** check box and press **OK.**





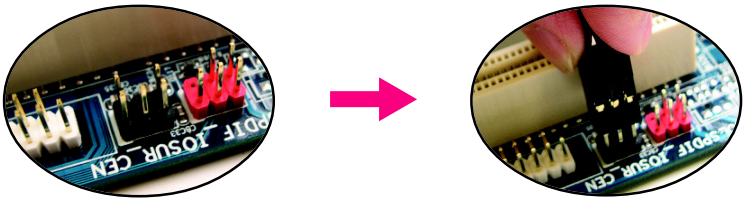
Advanced 6 Channel Analog Audio Output Mode (using Audio Combo Kit,Optional Device):
(Audio Combo Kit provides SPDIF output port : optical & coaxis and SURROUND-KIT : Rear R/L & CEN /Subwoofer)

SURROUND-KIT access analog output to rear channels and Center/Subwoofer channels. It is the best solution if you need 6 channel output, Line In and MIC at the same time. "SURROUND-KIT" is included in the GIGABYTE unique "Audio Combo Kit" as picture.

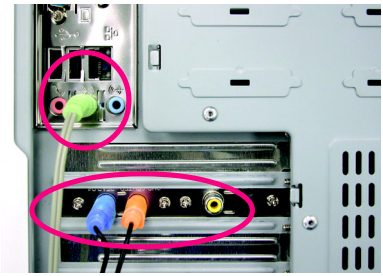


STEP 1:
Secure the metal bracket of the"Surround Kit" to the chassis back panel with a screw.

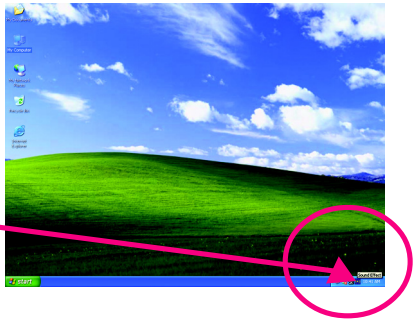
STEP 2:
Connect the "SURROUND-KIT" cable to the SUR_CEN connector on the M/B.



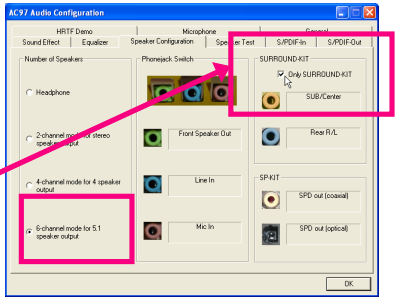
STEP 3:
Connect the front channels to back audio panel's "Line Out", the rear channels to SURROUND-KIT's REAR R/L, and the Center/Subwoofer channels to SURROUND-KIT's SUB CENTER.



STEP 4:
After installing the audio driver, you'll find a Sound Effect icon on the lower right hand taskbar. Click the icon to select the function.

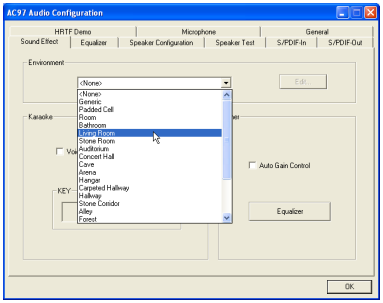


STEP 5:
On the AC97 Audio Configuration menu, click the **Speaker Configuration** tab and select the **6-channel mode for 5.1 speaker output** check box. Select the **Only SURROUND-KIT** check box and press **OK.**



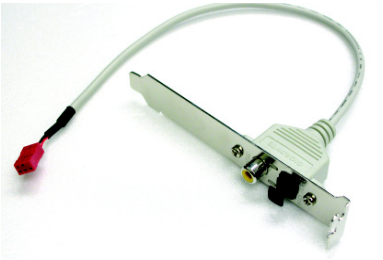
Basic 6 Channel Analog Audio Output Mode Notes:

When the **Environment** setting is **None**, the sound would be performed as stereo mode (2-channel output). Please select the other settings for 6 channels output.



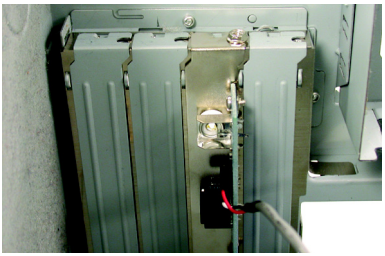
SPDIF Output Device (Optional Device)

A "SPDIF output" device is an optional device. The SPDIF_IO cable with rear bracket could link to the "SPDIF_IO" connector (As picture.) For the further linkage to decoder, rear bracket provides coaxial cable and Fiber connecting port.



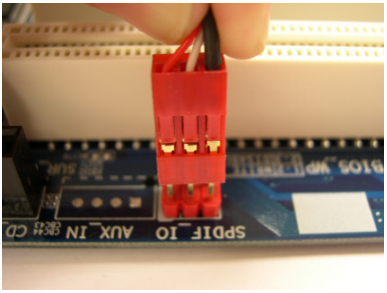
STEP 1:

Secure the metal bracket of the SPDIF Output device to the chassis back panel with a screw.



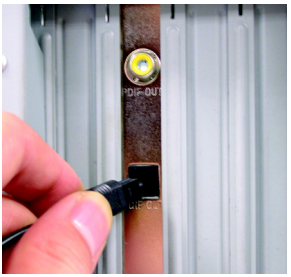
STEP 2:

Connect the SPDIF device cable to the SPDIF_IO connector on the motherboard.



STEP 3:

Connect SPDIF to the SPDIF decoder.



4-2 Troubleshooting

Below is a collection of general asked questions. To check general asked questions based on a specific motherboard model, please log on to http://www.gigabyte.com.tw

Question 1: I cannot see some options that were included in previous BIOS after updating BIOS. Why?
Answer: Some advanced options are hidden in new BIOS version. Please press Ctrl and F1 keys after entering BIOS menu and you will be able to see these options.

Questions 2: Why is the light of my keyboard/optical mouse still on after computer shuts down?
Answer: In some boards, a small amount of electricity is kept on standby after computer shuts down and that's why the light is still on.

Question 3: How do I clear CMOS?
Answer: If your board has a Clear CMOS jumper, please refer to the Clear CMOS steps in the manual. If your board doesn't have such jumper, you can take off the on-board battery to leak voltage to clear CMOS. Please refer to the steps below:

Steps:

1. Turn off power.
2. Disconnect the power cord from MB.
3. Take out the battery gently and put it aside for about 10 minutes (Or you can use a metal object to connect the positive and negative pins in the battery holder to makethem short for one minute).
4. Re-insert the battery to the battery holder.
5. Connect power cord to MB again and turn on power.
6. Press Del to enter BIOS and load Fail-Safe Defaults(or load Optimized Defaults).
7. Save changes and reboot the system.

Question 4: Why do I still get a weak sound after turning up the speaker to the maximum volume?
Answer: Please make sure the speaker you are using is equipped with an internal amplifier. If not, please change another speaker with power/amplifier and try again later.

Question 5: Sometimes I hear different continuous beeps from computer after system boots up. What do these beeps usually stand for?
Answer: The beep codes below may help you identify the possible computer problems. However, they are only for reference purposes. The situations might differ from case to case.

→AMI BIOS Beep Codes
*Computer gives 1 short beep when system boots successfully.
*Except for beep code 8, these codes are always fatal.

1 beep Refresh failure
2 beeps Parity error
3 beeps Base 64K memory failure
4 beeps Timer not operational
5 beeps Processor error
6 beeps 8042 - gate A20 failure
7 beeps Processor exception interrupt error
8 beeps Display memory read/write failure
9 beeps ROM checksum error
10 beeps CMOS shutdown register read/write error
11 beeps Cache memory bad

→ AWARD BIOS Beep Codes

1 short: System boots successfully
2 short: CMOS setting error
1 long 1 short: DRAM or M/B error
1 long 2 short: Monitor or display card error
1 long 3 short: Keyboard error
1 long 9 short: BIOS ROM error
Continuous long beeps: DRAM error
Continuous short beeps: Power error

Contact Us

- **Taiwan (Headquarters)**

GIGA-BYTE TECHNOLOGY CO., LTD.
Address: No.6, Bau Chiang Road, Hsin-Tien, Taipei 231, Taiwan
TEL: +886-2-8912-4888
FAX: +886-2-8912-4003
Tech. Support :
http://tw.giga-byte.com/TechSupport/ServiceCenter.htm
Non-Tech. Support(Sales/Marketing) :
http://ggts.gigabyte.com.tw/nontech.asp
WEB address (English): http://www.gigabyte.com.tw
WEB address (Chinese): http://chinese.giga-byte.com

- **U.S.A.**

G.B.T. INC.
TEL: +1-626-854-9338
FAX: +1-626-854-9339
Tech. Support :
http://tw.giga-byte.com/TechSupport/ServiceCenter.htm
Non-Tech. Support(Sales/Marketing) :
http://ggts.gigabyte.com.tw/nontech.asp
WEB address : http://www.giga-byte.com

- **Germany**

G.B.T. TECHNOLOGY TRADING GMBH
TEL: +49-40-2533040 (Sales)
+49-1803-428468 (Tech.)
FAX: +49-40-25492343 (Sales)
+49-1803-428329 (Tech.)
Tech. Support :
http://tw.giga-byte.com/TechSupport/ServiceCenter.htm
Non-Tech. Support(Sales/Marketing) :
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- **U.K.**

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http://tw.giga-byte.com/TechSupport/ServiceCenter.htm
Non-Tech. Support(Sales/Marketing) :
http://ggts.gigabyte.com.tw/nontech.asp
WEB address : http://uk.giga-byte.com

- **The Netherlands**

GIGA-BYTE TECHNOLOGY B.V.
TEL: +31-40-290-2088
NL Tech.Support: 0900-GIGABYTE (0900-44422983)
BE Tech.Support: 0900-84034
FAX: +31-40-290-2089
Tech. Support :
http://tw.giga-byte.com/TechSupport/ServiceCenter.htm
Non-Tech. Support(Sales/Marketing) :
http://ggts.gigabyte.com.tw/nontech.asp
WEB address : http://www.giga-byte.nl

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http://ggts.gigabyte.com.tw/nontech.asp
WEB address : http://www.gigabyte.com.cn

Shanghai
TEL: +86-021-63410999
FAX: +86-021-63410100

Beijing
TEL: +86-10-62102838
FAX: +86-10-62102848

Wuhan
TEL: +86-27-87851061
FAX: +86-27-87851330

GuangZhou
TEL: +86-20-87586074
FAX: +86-20-85517843

Chengdu
TEL: +86-28-85236930
FAX: +86-28-85256822

Xian
TEL: +86-29-85531943
FAX: +86-29-85539821

Shenyang
TEL: +86-24-23960918
FAX: +86-24-23960918-809

- **Australia**

GIGABYTE TECHNOLOGY PTY. LTD.
Tech. Support :
http://tw.giga-byte.com/TechSupport/ServiceCenter.htm
Non-Tech. Support(Sales/Marketing) :
http://ggts.gigabyte.com.tw/nontech.asp
WEB address : http://www.giga-byte.com.au

- **France**

GIGABYTE TECHNOLOGY FRANCE S.A.R.L.
Tech. Support :
http://tw.giga-byte.com/TechSupport/ServiceCenter.htm
Non-Tech. Support(Sales/Marketing) :
http://ggts.gigabyte.com.tw/nontech.asp
WEB address : http://www.gigabyte.fr

- **Russia**

Moscow Representative Office Of GIGA-BYTE Technology Co., Ltd.
Tech. Support :
http://tw.giga-byte.com/TechSupport/ServiceCenter.htm
Non-Tech. Support(Sales/Marketing) :
http://ggts.gigabyte.com.tw/nontech.asp
WEB address : http://www.gigabyte.ru

- **Poland**

Office of GIGA-BYTE TECHNOLOGY Co., Ltd. in POLAND
Tech. Support :
http://tw.giga-byte.com/TechSupport/ServiceCenter.htm
Non-Tech. Support(Sales/Marketing) :
http://ggts.gigabyte.com.tw/nontech.asp
WEB address : http://www.gigabyte.pl

- **Serbia & Montenegro**

Representative Office Of GIGA-BYTE Technology Co., Ltd. in SERBIA & MONTENEGRO
Tech. Support :
http://tw.giga-byte.com/TechSupport/ServiceCenter.htm
Non-Tech. Support(Sales/Marketing) :
http://ggts.gigabyte.com.tw/nontech.asp
WEB address: http://www.gigabyte.co.yu

- **Czech Republic**

Representative Office Of GIGA-BYTE Technology Co., Ltd. in CZECH REPUBLIC
Tech. Support :
http://tw.giga-byte.com/TechSupport/ServiceCenter.htm
Non-Tech. Support(Sales/Marketing) :
http://ggts.gigabyte.com.tw/nontech.asp
WEB address: http://www.gigabyte.cz

- **Romania**

Representative Office Of GIGA-BYTE Technology Co., Ltd. in Romania
Tech. Support :
http://tw.giga-byte.com/TechSupport/ServiceCenter.htm
Non-Tech. Support(Sales/Marketing) :
http://ggts.gigabyte.com.tw/nontech.asp
WEB address: http://www.gigabyte.com.ro